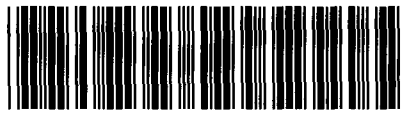

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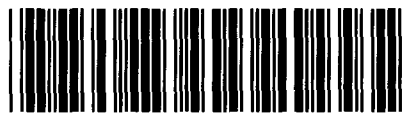

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State Office of Administrative Hearings

Lesli G. Ginn
Chief Administrative Law Judge

April 10, 2019

TO: **Stephen Journeay, Director** **VIA EMAIL**
Commission Advising and Docket Management
William B. Travis State Office Building
1701 N. Congress, 7th Floor
Austin, Texas 78701

RE: **SOAH Docket No. 473-19-1265**
PUC Docket No. 48785

JOINT APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY, LLC AND AEP TEXAS INC. TO AMEND CERTIFICATES OF CONVENIENCE AND NECESSITY FOR A DOUBLE CIRCUIT 345-KV TRANSMISSION LINE IN PECOS, REEVES, AND WARD COUNTIES (SAND LAKE – SOLSTICE CCN)

Enclosed is the Proposal for Decision (PFD) in the above-referenced case. By copy of this letter, the parties to this proceeding are being served with the PFD.

Please place this case on an open meeting agenda for the Commissioners' consideration. The deadline is May 28, 2019. Please notify us and the parties of the open meeting date, as well as the deadlines for filing exceptions to the PFD, replies to the exceptions, and requests for oral argument.

Sincerely,

Steven H. Neinast
Administrative Law Judge

Gabriel P. Soto
Administrative Law Judge

Enclosure
xc: All Parties of Record

300 W. 15th Street, Suite 504, Austin, Texas 78701/ P.O. Box 13025, Austin, Texas 78711-3025
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SOAH DOCKET NO. 473-19-1265
PUC DOCKET NO. 48785

JOINT APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY, LLC AND AEP TEXAS INC. TO AMEND CERTIFICATES OF CONVENIENCE AND NECESSITY FOR A DOUBLE CIRCUIT 345-KV TRANSMISSION LINE IN PECOS, REEVES, AND WARD COUNTIES (SAND LAKE – SOLSTICE CCN)	§	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

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JOINT APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY, LLC AND AEP TEXAS INC. TO AMEND CERTIFICATES OF CONVENIENCE AND NECESSITY FOR A DOUBLE CIRCUIT 345-KV TRANSMISSION LINE IN PECOS, REEVES, AND WARD COUNTIES (SAND LAKE – SOLSTICE CCN)	§	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

PROPOSAL FOR DECISION

I. INTRODUCTION AND SUMMARY

On November 7, 2018, Oncor Electric Delivery Company LLC (Oncor) and AEP Texas Inc. (AEP Texas) (collectively, the Applicants) filed an application (Application) with the Public Utility Commission of Texas (Commission or PUC) to amend their certificates of convenience and necessity (CCN) for a proposed 345-kilovolt (kV) double-circuit transmission line in Pecos, Reeves, and Ward Counties, Texas (the Project).[1] The Project consists of constructing a new transmission line on double-circuit 345-kV lattice steel tower structures, extending from Oncor's Sand Lake switch station (Sand Lake Switch) in Ward County to AEP Texas's Solstice switch station (Solstice Switch) in Pecos County.[2]

As explained below in this Proposal for Decision (PFD)[3] the Administrative Law Judges (ALJs) recommend the Commission approve the Applicants' preferred Route 320. The ALJs also recommend an agreed modification to a corner of Link B2 on Route 320, which will

[1] On the same day the Application was filed, LCRA Transmission Services Corporation (LCRA TSC) and AEP Texas jointly filed an application to amend their CCNs for a proposed double-circuit 345 kV transmission line in Pecos County, Texas to interconnect the Bakersfield and Solstice stations (Bakersfield-to-Solstice Project), which was assigned PUC Docket No. 48787 and SOAH Docket No. 473-19-1267. On November 15, 2018, Order No. 1 consolidated the Application and the application for the Bakersfield-to-Solstice Project into Docket No. 48785. SOAH Order No. 1 at 3 (Nov. 15, 2018). SOAH Order No. 10 severed and remanded the Bakersfield-to-Solstice Project to the Commission as a result of a comprehensive settlement reached with regard to that Project.

[2] Oncor/AEP Ex. 6 at 3 (Peppard Direct).

[3] The ALJs have adopted and incorporated parts of the parties' briefing into this PFD.

significantly reduce the number of habitable structures that otherwise would be within 500 feet of the centerline of that link on Route 320.

Route 320 (including the modification to Link B2) is a fully noticed route that does not require additional landowner consents. COG Operating LLC (Concho) and the group of intervenors referred to as Oxy[4] strongly oppose Route 320 for reasons discussed in more detail below. They instead prefer, in the following order: Route 325, Route 325 Modified, and Route 320 Modified.[5] As of the date the record closed in this docket on March 19, 2019, however, Concho and Oxy had not obtained landowner consents for all of their proposed modifications to either Routes 325 or 320. If Concho and Oxy had been able to obtain all landowner consents for their proposed modifications to Route 320, the ALJs would likely recommend that the Commission approve Route 320 Modified, which would then have the support of most active parties. Because of the lack of all landowner consents, however, the ALJs recommend approval of Route 320.

A. Project Overview

In February 2018, Oncor submitted a suite of projects known as Far West Texas Project 2 to the Electric Reliability Council of Texas (ERCOT). ERCOT separately reviewed and approved a variation of Far West Texas Project 2 to include the Sand Lake-to-Solstice Project, with ERCOT's Board of Directors endorsing the Project on June 12, 2018, as "critical to reliability" pursuant to 16 Texas Administrative Code (TAC) § 25.101(b)(3)(D).[6] The Project, therefore, requires an expedited review under a 180-day timeframe, and ERCOT's recommendation in support of the Project is entitled to great weight in this proceeding.

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[4] Oxy is a group of intervenors comprised of Occidental Permian Ltd., Oxy Delaware Basin, LLC, Oxy USA Inc., Oxy USA WTP LP, Houndstooth Resources, LLC, and Occidental West Texas Overthrust, Inc.

[5] "Route 320 Modified," as proposed by Oxy and Concho, is not the modification to Link B2 on Route 320 as recommended by the ALJs.

[6] Oncor/AEP Ex. 9 at 18 (Kawakami Direct).

The Project will require a typical right-of-way (ROW) width of approximately 160 feet, and the centerline will be located in approximately the center of the ROW.[7] The Applicants have not yet acquired any of the ROW for the Project.[8]

The issue of need was not contested in this proceeding. As noted, ERCOT has designated this Project as critical to reliability.

The Application included information regarding 29 potential alternative routes, which were selected from among 408 preliminary alternative routes developed by Halff Associates, Inc. (Halff) as reflected in the environmental and alternative route analysis filed with the Application.[9] The 29 alternative routes are geographically diverse and differ with respect to route length, cost, number of habitable structures, and utilization of existing compatible corridors.[10] The alternative routes range in length from approximately 44.5 miles to 58.7 miles, and range in cost from approximately $98,220,000 to $126,903,000, excluding costs necessary to modify structures and equipment at the Sand Lake and Solstice stations.[11] The number of habitable structures within 500 feet of the alternative routes range between two and 66.[12]

B. Supported Routes

Four alternative routes remained in contention at the commencement of the hearing on the merits on February 15, 2019, with or without proposed modifications:

- Route 41 supported by Commission Staff;

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[7] Oncor/AEP Ex. 6 at 4 (Peppard Direct).

[8] Oncor/AEP Ex. 6 at 4 (Peppard Direct).

[9] Oncor/AEP Ex. 7 at 7-9 (Perkins Direct); Oncor/AEP Ex. 1, Attachment 1.

[10] Oncor/AEP Ex. 7 at 7 (Perkins Direct).

[11] Oncor/AEP Ex. 7 at 7 (Perkins Direct); AEP/Oncor Ex. 1 at 4; Attachment No. 3.

[12] Oncor/AEP Ex. 7 at 7 (Perkins Direct).

- Route 320 supported by the Applicants, Forrister Generation-Skipping Trust, and Alan Zeman;
- Route 324 supported by Texas Parks and Wildlife Department (TPWD), which is not a party; and
- Route 325 Modified or Route 325 supported by Concho and Oxy.

Plains Marketing, L.P. and Plains Pipeline, L.P. (collectively Plains Pipeline) supports either Route 320 or Route 325 (either modified or as originally proposed), and opposes Route 41. Forrister Generation-Skipping Trust and Alan Zeman prefer Route 320, but state that the other three alternative routes would also be acceptable.[13] Oxy's and Concho's least preferred routes are Routes 320 and 41, followed by Routes 320 Modified and 41 Modified.[14]

Table 1 below compares the four routes based on primary criteria submitted with the Application:

[13] Initial Post-Hearing Brief of Forrister Generation-Skipping Trust and Alan Zeman at 2 (Mar. 6, 2019).

[14] Oxy strongly opposes Routes 320 and 41 without modifications. Oxy Initial Brief at 4. Routes 320 and 41 are identical except for their second and third links.

Table 1

Criteria	Route 41	Route 320	Route 324	Route 325
Length in miles	45.7	44.5	47.2	53.7
Cost	$99,818,000	$98,220,000	$105,272,000	$116,382,000
Habitable structures within 500 feet of centerline	3	38	38	37
Length of route parallel to transmission (ROW) in miles	1.9	1.9	12.2	11
Length of route parallel to other compatible right-of-way (ROW) in feet	64,134	63,940	94,861	138,047
Length of route parallel to apparent property lines in feet	44,559	44,365	21,649	78,749
Length of route parallel to pipelines in feet	1,244	1,244	5,606	747
Length of route through known habitat of endangered or threatened species in feet	63	63	63	10,532
Length of route across cropland in feet	1,233	1,233	1,233	1,233
Length of route across pastureland or rangeland in feet	198,704	192,570	215,746	231,612
Length of route across high archeological or historical site potential in feet	62,797	63,063	62,021	72,768
Estimated length of ROW within foreground visual zone of US and state highways in feet	20,298	20,298	20,298	32,979
Length of route across lakes or ponds (open waters) in feet	83	80	80	215

A drawing depicting the four contested routes is attached as Appendix A. This drawing is derived from the two large-scale colored maps included in the Application.[15] The drawing is an approximation, and is provided to show only the four routes, out of potentially 29, that were in contention prior to the record close on March 19, 2019. Routes 320 and 41 run roughly in a north and south direction between the Sand Lake Switch and the Solstice Switch. Route 325 swings in an arc to the west off of Routes 320 and 41, and Route 324 swings in an arc to the east off of those central routes.

The Applicants recommended that Route 320 best meets the requirements of the Public Utility Regulatory Act (PURA)[16] and the PUC's rules.[17] Route 320 is approximately 44.5 miles long and is the shortest route filed with the Application;[18] it is estimated to cost $98,220,000, excluding station costs, which is the least expensive alternative route and $28,683,000 less than the most expensive of the 29 alternative routes.[19] With a modification to Link B2 discussed in more detail below, a significant number of habitable structures would no longer be within 500 feet of the centerline of Routes 320, 324, or 325.

Commission Staff supports Route 41 because there are only three habitable structures within 500 feet of the centerline of the ROW for this route,[20] whereas Routes 320 (without the modification to Link B2), 324, and 325 have 37 or more habitable structures within 500 feet of their centerlines.[21] None of the routes have habitable structures within their ROW. Route 41 is the third shortest route at 45.7 miles and costs $99,818,000, excluding substation costs, which is the second least expensive route, and $1,598,000 more expensive than Route 320.[22] The

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[15] Oncor/AEP Ex. 1, Attachment 1, Appendix G.

[16] Public Utility Regulatory Act, Tex. Util. Code §§ 11.001-66.016.

[17] Oncor/AEP Ex. 7 (Perkins Direct), Ex. BJP-5 (routing memorandum).

[18] Oncor/AEP Ex. 7 at 8-9 (Perkins Direct).

[19] Oncor/AEP Ex. 7 at 8-9 (Perkins Direct).

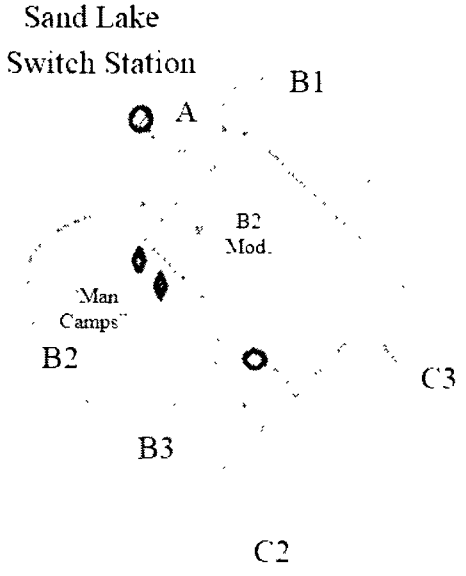
[20] Staff Ex. 2 at 32 (Bautista Direct).

[21] Staff Ex. 2 at 26 (Bautista Direct); *see also* Oncor/AEP Ex. 1, Attachment 1, Appendix E (Table 7.2) showing that some of the routes have up to 66 habitable structures within 500 feet of the centerline.

[22] Oncor /AEP Ex. 7 (Perkins Direct). Ex. BJP-5; Oncor/AEP Ex. 1, Attachment 3.

difference between Routes 320 and 41 is depicted in the following Diagram 1, which is an approximation based on the detailed and larger colored maps entered into the record. In Diagram 1, Route 320 is comprised of Links A, B2, B3, and C2. Route 41 is comprised of Links A, B1, C3, and C2.[23]

Diagram 1[24]



Route 41 is identical to Route 320, except for Links B2 and B3 on Route 320, as compared to Links B1 and C3 on Route 41. Route 41, by following Links B1 and C3, avoids 34 habitable structures clustered along the lower leg of Link B2 on Route 320. Plains Pipeline, however, has proposed a modification to Link B2 on property owned by it that would move the transmission centerline, on their property, to more than 500 feet away from the at least 12 habitable structures otherwise close to that line.[25] Plains Pipeline's proposal essentially bifurcates the western corner of the rectangle, and places 12 structures more than 500 feet from

[23] *See also* Oncor/AEP Ex. 1, Attachment 1, Appendix E (Table 7.1), which lists all links in all routes studied by Halff.

[24] This diagram is based on Plains Pipeline Ex. 2 at 1. This portion of the Sand Lake-to-Solstice Project may also be found on the maps included in Oncor/AEP Ex. 1, Attachment 1, Appendix G.

[25] *See* Plains Pipeline Response to Order No. 11 (Mar. 19, 2019) (Response). Page 2 of Plains Pipeline's Response contains a map that shows this proposal. If this modification to Link B2 is accepted, the transmission line would parallel an existing natural gas pipeline ROW, on the west side of that pipeline, and angle back into Link B2 on Plains Pipeline property without entering a neighboring tract to the southeast.

the centerline.[26] Plains Pipeline strongly favors Route 320 over Route 41 because Links B2 and B3 avoid multiple pipeline crossings and "transmission-line-encircled pockets" on Plains Pipeline's property that otherwise are affected by Links B1 and C3 on Route 41.[27]

Oxy's and Concho's primary preference is Route 325 Modified.[28] They oppose Route 320 because it traverses densely packed oil and gas production properties. Route 325 Modified avoids much of this densely packed corridor. As roughly shown on Appendix A, Route 325 is the same as Routes 320 and 41 for approximately eight miles at its northern end, but then takes links to the west to avoid the central corridor oil and gas production fields, ultimately turning back into the southern terminus at the Solstice Switch. Route 325 is approximately 53.7 miles long, which is the longest of the four routes under consideration, and the twenty-sixth shortest of the 29 routes studied.[29] It is estimated to cost $116,382,000, excluding station costs, which is the twenty-third least expensive alternative route, and $18,162,000 more expensive than Route 320.[30]

TPWD did not file testimony or a statement of position in this docket, but filed a letter addressed to Commission Staff on January 15, 2019, offering a number of comments and recommendations based on its review of the Environmental Assessment (EA) and Alternative Routes Analysis regarding the Project. TPWD provided information and recommendations regarding the preliminary study area for this Project to Halff on August 1, 2018, which was included in Appendix A to the EA. TPWD selected Route 324 as the route having the least impact on fish and wildlife resources.[31] Route 324 follows Routes 320 and 41 for approximately 12 miles and then follows Links J21, J22, J3, K4, and K5 to the east to avoid wildlife habitat,

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[26] *See* Diagram 1 above, showing the modification to Link B2 as a dashed line labeled "B2 Mod."

[27] Plains Pipeline Initial Brief at 6; Tr. at 55-56 (Feb. 21, 2019).

[28] Route 325 Modified uses links A, B2, B3, C2 Modified, D1, E1/F1 Modified, I1, K11 Modified, K12, L2, and Z. Oxy originally supported Route 328, but confirmed at the prehearing conference that, based on Concho's testimony, they supported Route 325 Modified with Concho. Tr. at 23 (Feb. 15, 2019).

[29] Oncor /AEP Ex. 7 (Perkins Direct), Ex. BJP-5; Oncor/AEP Ex. 1, Attachment 12, Table 1.

[30] Oncor/AEP Ex. 1, Attachment 3 (Estimated Costs).

[31] TPWD Comments at 5 (Jan. 15, 2019).

ultimately turning back into the southern terminus at the Solstice Switch. Route 324 is the sixth shortest route at 47.2 miles and costs $105,272,000, excluding substation costs, which is $7,052,000 more expensive than Route 320, and the fourth least expensive route.[32]

In summary, the Applicants and non-oil and gas production intervenors support Route 320, primarily because it is the least expensive, shortest, and does not require additional landowner consents. Commission Staff supports Route 41 because it has the fewest number of habitable structures within 500 feet of the route centerline. Concho and Oxy support Route 325 or 325 Modified because it avoids significant oil and gas production properties that are traversed by Routes 320 and 41. TPWD, which is not a party, supports Route 324 because it has the least effect on fish and wildlife resources. Plains Pipeline does not oppose any routes except Route 41, and has proposed a modification to the corner of Link B2 on Route 320 that significantly reduces the number of habitable structures within 500 feet of the centerline of that route.

C. The ALJs' Recommendation

The ALJs recommend Route 320 with the modification to Link B2 to reduce the number of affected habitable structures from 38 to approximately 26. The modification to Link B2 does not require additional landowner consents because the modification is made on property owned by Plains Pipeline, and Plains Pipeline has agreed to this modification. While Route 41 is identical to Route 320 except for Links B2 and B3, it avoids most of the habitable structures that weigh against Routes 320, 324, and 325 – almost all of which are adjacent to the northwest corner of Link B2. Route 320 affects more wildlife habitat than Route 324, but less habitat than Route 325. Route 324 is longer and more expensive than Route 320, and Route 325 (whether as proposed or modified) is the longest and most expensive of the four routes under consideration as of the date of the hearing.

[32] Oncor /AEP Ex. 7 (Perkins Direct), Ex. BJP-5; Oncor/AEP Ex. 1, Attachment 3.

Concho and Oxy strongly oppose Routes 320 and 41 because those routes traverse active oil and gas production fields that Concho and Oxy contend would be adversely affected from a financial and safety perspective. There are a number of significant adverse attributes to Route 325, including its cost, length, and effect on the environment and wildlife resources, and the fact that landowner consents for all of Concho's and Oxy's proposed modifications to Routes 325 and 320 were not obtained as of the date the record closed in this docket. Taken into account all relevant factors, as set out in more detail below, Route 320 provides the best alternative for this necessary and critical transmission line.

II. PROCEDURAL HISTORY

On November 7, 2018, the Applicants filed the Application and the direct testimony of their witnesses, Brent Kawakami, Wilson Peppard, Russell Marusak, Thomas Reynolds, III, and Brenda Perkins. The Commission issued an order of referral and preliminary order on November 14, 2018, referring this matter to the State Office of Administrative Hearings (SOAH). On November 15, 2018, the ALJs issued SOAH Order No. 1, granting the Applicants' and LCRA TSC's joint motion to consolidate Commission docket numbers 48785 and 48787.[33] SOAH Order No. 1 also provided notice of a prehearing conference, described jurisdiction, requested a proposed procedural schedule, referenced the statutes and rules involved, established filing and service requirements, informed parties that they were required to file written testimony or a statement of position, emphasized that any party who failed to file written testimony or a statement of position would be dismissed from the proceeding, and provided other information.[34]

On December 10, 2018, the ALJs issued SOAH Order No. 2, which memorialized the prehearing conference held on November 27, 2018, adopted a procedural schedule including hearing dates, and suspended the requirement of traditional service.[35] SOAH Order No. 2 also

[33] SOAH Order No. 1 at 3 (Nov. 15, 2018).

[34] SOAH Order No. 1 at 3-11 (Nov. 15, 2018).

[35] SOAH Order No. 2 at 3-6 (Dec. 10, 2018).

granted intervenor status to various parties.[36] From January 8-10, 2019, various intervenors filed direct testimony or a statement of position. On January 15, 2019, SOAH Order No. 3 granted intervenor status to additional parties and the withdrawal of a party.[37] Also on January 15, 2019, TPWD filed the letter referenced above with various comments and recommendations regarding the Project.

The Applicants and LCRA TSC filed a joint letter on January 18, 2019, in compliance with SOAH Order No. 3, identifying the intervenors who did not file direct testimony or a statement of position. That same day, Commission Staff filed an objection to and motion to strike portions of certain intervenors' direct testimony. On January 24, 2019, SOAH Order No. 4 identified intervenors who failed to file testimony or a statement of position by the January 10, 2019, deadline and proposed to remove those intervenors as parties to the proceeding.[38] On January 30, 2019, SOAH Order No. 5 overruled Commission Staff's objections and denied the motion to strike, but granted Commission Staff's alternative request, determining that the direct testimony at issue would be considered intervenor statements of concern and the appropriate evidentiary weight would be applied.

On January 30, 2019, Commission Staff filed the direct testimony of its witness, David Bautista. On February 4, 2019, Concho filed the cross-rebuttal testimony of Brent Lowery, and Oxy filed the cross-rebuttal testimony of Albert Mendoza.

On February 6, 2019, the Applicants filed the rebuttal testimony of Wilson Peppard, Russell Marusak, Thomas Reynolds, III, and Brenda Perkins. Additionally, the Applicants moved to admit the direct testimony of Brent Kawakami into the evidentiary record because there was no challenge to the Project "need" analysis. In conjunction with moving to admit testimony, the Applicants requested cancellation of the need phase of the hearing on the merits and proposed a prehearing conference in lieu of the hearing. On February 8, 2019, SOAH Order

[36] SOAH Order No. 2 at 2 (Dec. 10, 2018).

[37] SOAH Order No. 3 at 2 (Jan 15, 2019).

[38] SOAH Order No. 4 at 1-2 (Jan. 24, 2019).

No. 6 cancelled the need phase of the hearing on the merits, scheduled a prehearing conference in its place, and admitted Mr. Kawakami's testimony into evidence.

At the prehearing conference convened on February 15, 2019, the ALJs and parties primarily discussed the procedures to be followed at the hearing on the merits to convene on February 19, 2019, including admitting evidence and severing and remanding the Bakersfield-to-Solstice Project due to an anticipated settlement of that proposal. The hearing on the merits commenced on February 19, 2019, at which documents supporting settlement of the Bakersfield-to-Solstice Project were admitted. On February 21, 2019, the hearing on the merits reconvened to address the routing issues pertaining to the Sand Lake-to-Solstice Project. The hearing on the merits in this docket concluded on that day.

On February 22, 2019, SOAH Order No. 10 severed and remanded the Bakersfield-to-Solstice Project to the Commission.

Parties filed initial briefs on March 5 and 6, 2019, and reply briefs on March 12, 2019. On March 12, 2019, Concho and Oxy filed motions to admit landowner consent agreements and to allow the evidentiary record to remain open until March 19, 2019, to give Oxy and Concho time to obtain additional landowner consents that would support their proposed route modifications. On March 13, 2019, SOAH Order No. 11 granted the motion to admit the landowner consents, allowed the evidentiary record to remain open until March 19, 2019, and required Oxy, Concho, and Plains Pipeline to file reports on March 19, 2019.

On March 19, 2019, Oxy and Concho filed additional landowner consents, but reported that they had not obtained consents for all proposed modifications to their preferred routes. Plains Pipeline filed a report addressing a proposed modification to Link B2 on Route 320. The evidentiary record closed on that day.

III. JURISDICTION AND NOTICE

The Commission has jurisdiction over this proceeding pursuant to the PURA §§ 14.001, 32.001, 37.051, 37.053, 37.054, and 37.056. SOAH has jurisdiction over this proceeding under PURA § 14.053 and Texas Government Code § 2003.049.

The Applicants have complied with the notice requirements of PURA § 37.054 and 16 TAC § 22.52(a). The Applicants provided written notice of the Project and held a public meeting on August 15, 2018.[39] A total of nine people signed in as attending the public participation meeting, including one member of the local media and one local official.[40] One person completed a questionnaire at the public meeting, and the local official attendee provided electronic data on City of Pecos water wells and pipelines following the public meeting.[41]

The Applicants provided notice of the Application to neighboring utilities, municipalities, county governments, the Department of Defense Siting Clearinghouse, pipeline owners/operators, and directly affected landowners; provided notice of and a copy of the Application to the Office of Public Utility Counsel (OPUC); and provided a copy of Halff's EA and Alternative Routing Analysis to TPWD.[42] The Applicants also provided notice of the Application by publication in newspapers having general circulation in the counties where the CCN is being requested.[43] The preliminary review by Department of Defense Siting Clearinghouse concluded the Project as proposed would have minimal impact on military operations conducted in the area.[44]

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[39] Oncor/AEP Ex. 1 at 19.

[40] Oncor/AEP Ex. 1 at 19.

[41] Oncor/AEP Ex. 1 at 19-20; Oncor/AEP Ex. 5 at 9 (Marusak Direct).

[42] Oncor/AEP Ex. 2 (notice affidavit); Oncor/AEP Ex. 7 at 13-14 (Perkins Direct).

[43] Oncor/AEP Ex. 3 (newspaper notice affidavit); Oncor/AEP Ex. 7 at 12-13 (Perkins Direct). *See also* Oncor/AEP Ex. 4 (supplemental affidavit attesting to notice).

[44] Oncor/AEP Ex. 1, Attachment No. 1, Appendix A at A-41 (Department of Defense letter dated Sept. 17, 2018).

Commission Staff recommended that the Applicants' notice be found sufficient on December 6, 2018,[45] and SOAH Order No. 2 approved Oncor's notice based on Commission Staff's recommendations.[46] On January 14, 2019, the Applicants filed a supplemental affidavit and request for approval attesting to re-sent notices provided to certain affected landowners, and SOAH Order No. 4 approved the Applicants' supplemental notice affidavit as compliant with Commission rules.[47] No party contested the Applicants' provision of notice. Accordingly, the Applicants have complied with 16 TAC § 22.52(a)(1)-(4).

IV. ISSUES RELATING TO THE APPLICATION

A. Application and Route Adequacy

Issue Number 1 in the Order of Referral and Preliminary Order asks:

> *Is Oncor Electric Delivery Company LLC and AEP Texas Inc.'s application to amend their respective CCNs adequate? Does the application contain an adequate number of reasonably differentiated alternative routes to conduct a proper evaluation?*

The ALJs find that the Application is both adequate and sufficient as Commission Staff recommended[48] and as determined in SOAH Order No. 2.[49] The Application addresses 29 geographically diverse routes, more than an adequate number of reasonably differentiated routes from which the Commission may conduct a proper evaluation.[50] Moreover, no party contested the adequacy of the filed routes. Accordingly, the Applicants have satisfied Issue No. 1.

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[45] Commission Staff's Recommendation on Sufficiency of Notice (Dec. 6, 2018).

[46] SOAH Order No. 2 at 2 (Dec. 10, 2018).

[47] SOAH Order No. 4 at 3 (Jan. 24, 2019).

[48] Staff's Recommendation on Sufficiency of Applications (Nov. 26, 2018).

[49] SOAH Order No. 2 at 1-2 (Dec. 10, 2018).

[50] Oncor/AEP Ex. 7 at 12 (Perkins Direct); Oncor/AEP Ex. 1, Attachment 1, Appendix G.

B. Need and Project Alternatives

Issue Number 2 in the Order of Referral and Preliminary Order asks:

Are the proposed facilities necessary for the service, accommodation, convenience, or safety of the public within the meaning of PURA § 37.056(a) taking into account the factors set out in PURA § 37.056(c)? In addition,

a) How does the proposed facility support the reliability and adequacy of the interconnected transmission system?

b) Does the proposed facility facilitate robust wholesale competition?

c) What recommendation, if any, has an independent organization, as defined in PURA § 39.151, made regarding the proposed facility?

d) Is the proposed facility needed to interconnect a new transmission service customer?

The ALJs find that the Project is needed for the service, accommodation, convenience, and safety of the public.[51] ERCOT, which is an independent organization under PURA § 39.151, endorsed the Project as critical to the reliability of the ERCOT transmission system pursuant to 16 TAC § 25.101(b)(3)(D).[52] Moreover, ERCOT's recommendation is entitled to great weight in accordance with 16 TAC § 25.101(b)(3)(A).[53] No party contested the need for the Project, and Commission Staff also recommended approval of the Project.

The Project supports the reliability and adequacy of the ERCOT transmission system in west Texas. As stated in the Application and Mr. Kawakami's direct testimony, the Project is needed both to serve rapidly growing area load—primarily due to oil and gas-related uses in this area of west Texas known as the Delaware Basin—as well as associated economic expansion.[54]

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[51] Oncor/AEP Ex. 9 at 6-9, 18 (Kawakami Direct).

[52] Oncor/AEP Ex. 9 at 18 (Kawakami Direct).

[53] Oncor/AEP Ex. 9 at 18-19 (Kawakami Direct).

[54] Oncor/AEP Ex. 9 at 6-7 (Kawakami Direct).

The Project will serve to prevent future thermal and voltage violations on the existing 69 and 138 kV transmission lines serving the area and will foster continued load growth in this region.[55]

Without the Project, unsolved contingencies show an inability of Oncor's current 138 kV transmission system in this area (referred to as the Culberson Loop) to maintain acceptable voltages following a disturbance, resulting in potential voltage collapse along these lines where customers already experience pre-contingency voltage stability issues.[56] ERCOT's independent review of the project found voltage violations under established reliability criteria.[57] Such scenarios could cause all load on the lines in the area to be dropped.[58] Between 2012 and 2017, the load on the nearby Culberson Loop lines rose from 29.3 megawatts (MW) to 246.4 MW.[59] As of October 2018, the highest recorded real-time value based on telemetry data is 395 MW.[60] Based solely on actual load increases for Oncor substations and confirmed customer load increases (based on financially committed customer contracts), loads on the Culberson Loop lines are expected to increase significantly, with projected 2019 non-coincident summer peak load on these lines of 902 MW, and ultimately 1,549 MW of projected non-coincident summer peak load on these lines by 2022.[61] If the load projection parameters are expanded to take into account pending requests that are currently being studied and contractually negotiated between Oncor and customers, there is a likelihood of even further growth for non-coincident summer peak loads; current projections estimate that, for 2020, the non-coincident summer peak load will grow to 1,406 MW; for 2021, will grow to 1,563 MW; and for 2022, will grow to 1,639 MW.[62]

In April 2016, Oncor and AEP Texas submitted for review by ERCOT's Regional Planning Group (RPG), an independent organization under PURA § 39.151, the suite of projects

[55] Oncor/AEP Ex. 9 at 8-11 (Kawakami Direct).

[56] Oncor/AEP Ex. 1 at 10; Oncor/AEP Ex. 9 at 15-18 (Kawakami Direct).

[57] Oncor/AEP Ex. 9 at 8-10 (Kawakami Direct).

[58] Oncor/AEP Ex. 1 at 10; Oncor/AEP Ex. 9 at 8-10 (Kawakami Direct).

[59] Oncor/AEP Ex. 9 at 6 (Kawakami Direct).

[60] Oncor/AEP Ex. 9 at 6 (Kawakami Direct).

[61] Oncor/AEP Ex. 9 at 6-7 (Kawakami Direct).

[62] Oncor/AEP Ex. 9 at 7 (Kawakami Direct).

known as the Far West Texas Project.[63] ERCOT performed steady state and dynamic stability power flow studies during its review of the Far West Texas Project and found multiple violations under North American Electric Reliability Corporation (NERC) Reliability Standard TPL-001-4.[64] ERCOT's steady state analysis when reviewing the Far West Texas Project identified the following violations: thermal violations on multiple lines in the Barilla Junction Area under single contingencies in both generation cases it studied; unsolvable contingencies; and various voltage violations and unacceptable voltage deviations in the Culberson Loop under one or both cases studied.[65] ERCOT conducted detailed analyses and tests of four short-listed options and, in June 2017, ERCOT's Board of Directors endorsed construction of, among other things, a new 345 kV transmission line extending from Bakersfield to Solstice, to be built by LCRA TSC and AEP Texas on double-circuit-capable 345 kV structures with one 345 kV circuit initially installed, and expansion of Solstice to include the installation of a 345 kV ring-bus arrangement with two 600 megavolt amperes 345/138 kV autotransformers.[66]

In February 2018, Oncor submitted a suite of projects known as the Far West Texas Project 2 to the ERCOT RPG.[67] ERCOT conducted an independent review of the Far West Texas Project 2, found multiple reliability violations under NERC Reliability Standard TPL-001-4, and conducted detailed analyses of three short-listed options.[68] In June 2018, ERCOT's Board of Directors endorsed construction of, among other things, a variation of the proposed Far West Texas Project 2 to include the Sand Lake-to-Solstice double-circuit 345 kV line, expansion of the Sand Lake Switch, and a second circuit on the Bakersfield-to-Solstice line. ERCOT endorsed these projects as Tier 1 transmission projects needed to support the reliability of the ERCOT transmission system.[69] Further, ERCOT's Board of Directors endorsed the

[63] Oncor/AEP Ex.9 at 9 (Kawakami Direct).

[64] Oncor/AEP Ex. 9 at 10-11 (Kawakami Direct).

[65] Oncor/AEP Ex. 9 at 10-11 (Kawakami Direct).

[66] Oncor/AEP Ex. 9 at 11-13 (Kawakami Direct).

[67] Oncor/AEP Ex. 9 at 14 (Kawakami Direct).

[68] Oncor/AEP Ex. 9 at 14-18 (Kawakami Direct).

[69] Oncor/AEP Ex. 9 at 18 (Kawakami Direct).

proposed transmission facilities as critical to the reliability of the ERCOT transmission system pursuant to 16 TAC § 25.101(b)(3)(D).[70]

ERCOT determined that the Project will meet the necessary reliability criteria in the most cost effective manner while also providing multiple expansion paths to accommodate future load growth in the study area.[71]

The Project facilitates robust wholesale competition by facilitating the delivery of economical electric power at 345 kV from existing and future generation resources located both inside and outside of the area to existing and future electric customers in the area. It will also provide 345 kV transmission service to an area that is not currently served at this voltage.[72]

The need for the Project is rapid load growth. This load growth is primarily due to oil and natural gas production, processing, and transportation, as well as associated economic expansion in the area as shown in the historical and projected load growth figures.[73] As discussed above, Oncor projects this strong load growth to continue.[74] Given this growth, the Project will serve many new customers and improve reliability to existing customers in west Texas.

Under PURA § 37.056(c), the Project is necessary to serve current and projected load that the existing transmission service in the area cannot handle without reliability violations. Approving the Project would greatly assist the Applicants and other utilities serving this area of west Texas in meeting the rapidly growing needs of electric consumers. Accordingly, the Applicants have satisfied Issue No. 2.

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[70] Oncor/AEP Ex. 9 at 18-19 (Kawakami Direct).

[71] Oncor/AEP Ex. 9 at 17-18 (Kawakami Direct).

[72] Oncor/AEP Ex. 9 at 18 (Kawakami Direct).

[73] Oncor/AEP Ex. 9 at 6 (Kawakami Direct).

[74] Oncor/AEP Ex. 9 at 6-7 (Kawakami Direct) (showing that projected load growth on Culberson Loop—based only on financially committed customer contracts—will reach 1,597 MW by 2023).

Issue Number 3 in the Order of Referral and Preliminary Order asks:

> *Is the transmission project the better option to meet this need when compared to employing distribution facilities? If Oncor Electric Delivery Company LLC and AEP Texas Inc. [are] not subject to the unbundling requirements of PURA § 39.051, is the project the better option to meet the need when compared to a combination of distributed generation and energy efficiency?*

The ALJs find that the Project is superior to any distribution alternatives because such alternatives would not improve the reliability and operational capacity of the transmission system in the area.[75] Distribution lines are not practical alternatives to the Project in addressing the identified reliability needs of the transmission system because they would not improve the reliability and operational capability of the transmission system, and thus a distribution option is not feasible.[76] All existing transmission facilities in the study areas were constructed and operate at 138 kV, and serve customers directly; thus, upgrading of voltage would require all customers and existing stations to be rebuilt to be served from 345 kV.[77] Conductor bundling would not address the reliability and operational issues under the contingencies of concern because any bundled circuits would necessarily be located on the same structures as the existing 138 kV lines in the area.[78] Additionally, bundling conductors does not provide the bi-directional looped service capability that is needed to address the reliability and operational flexibility for existing and future customers.[79] Adding transformers would not address the reliability and operational issues under the contingency of concern because new 345/138 kV transformers within the Culberson Loop would still be served from the planned Odessa EHV—Riverton/Moss—Riverton 345 kV transmission line.[80] Further, the Applicants are not subject to the unbundling requirements of PURA § 39.051, and consequently the second aspect of this issue is not applicable.

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[75] Oncor/AEP Ex. 1 at 17; Oncor/AEP Ex. 9 at 22-23 (Kawakami Direct).

[76] Oncor/AEP Ex. 1 at 17; Oncor/AEP Ex. 9 at 22-23 (Kawakami Direct).

[77] Oncor/AEP Ex. 9 at 23 (Kawakami Direct).

[78] Oncor/AEP Ex. 9 at 23 (Kawakami Direct).

[79] Oncor/AEP Ex. 9 at 23 (Kawakami Direct).

[80] Oncor/AEP Ex. 9 at 23 (Kawakami Direct).

Additionally, ERCOT studied three primary options in its independent review of the Far West Texas Project 2, and each of those options included the Sand Lake-to-Solstice line because ERCOT considered this option as a universal upgrade to accommodate future projects and allow for additional load growth on the Culberson Loop.[81] Alternative pathways for the Project (*i.e.*, options for connecting stations other than the Sand Lake and Solstice Switches with a 345 kV line) were rejected because these options would not provide an optimal location for the strong voltage source to address the identified criteria violations under the contingencies required to be studied.[82] Accordingly, the Applicants have satisfied Issue No. 3.

V. ROUTE SELECTION

Issue Number 4 in the Order of Referral and Preliminary Order asks:

Which proposed transmission line route is the best alternative weighing the factors set forth in PURA § 37.056(c) and 16 Tex. Admin. Code § 25.101(b)(3)(B)?

A. Overview

Each of the four contested routes, as proposed, is feasible and complies with the applicable routing requirements. The ALJs have concluded that Route 320, with a modification to Link B2, best meets the factors set forth in PURA § 37.056(c) and 16 TAC § 25.101(b)(3)(B). A representative selection of relevant criteria applicable to Route 320, as compared to the other three contested routes, is set out in Table 1 in this PFD. Specific details regarding these criteria and considerations are discussed in more detail below.

[81] Oncor/AEP Ex. 9 at 21-22 (Kawakami Direct).

[82] Oncor/AEP Ex. 9 at 22 (Kawakami Direct).

B. Adequacy of Existing Service and Need for Additional Service

The Project is needed for three reasons: (1) to support load growth in the area; (2) to address reliability violations under ERCOT reliability criteria and NERC reliability standards; and (3) to provide the infrastructure necessary to facilitate future transmission system expansion and generation development.[83] In its independent review of Far West Project 2, ERCOT initially evaluated numerous alternatives, and it subsequently endorsed one of three short-listed options, each of which included the Sand Lake-to-Solstice 345 kV line.[84] Approximately four months later, the ERCOT Board of Directors endorsed a variation of the proposed Far West Texas Project 2, which included the Project as a Tier 1 transmission project needed to support the reliability of the ERCOT transmission system.[85] The ERCOT Board of Directors also adopted a resolution endorsing the Project as critical to the reliability of the ERCOT transmission system pursuant to 16 TAC § 25.101(b)(3)(D).[86]

As discussed above, the Project will deliver 345 kV transmission to an area that is not currently served at this voltage and also will address critical reliability issues resulting from rapid load growth in an area of oil and natural gas development and associated economic expansion.[87] The Project will support load growth in the area, address reliability violations under ERCOT protocols and NERC reliability standards, and provide infrastructure necessary to facilitate future transmission system expansion.[88] Consequently, the Project is needed to address reliability violations and will also serve to improve service for new and existing customers in the area.

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[83] Oncor/AEP Ex. 9 at 6, 19 (Kawakami Direct).

[84] Oncor/AEP Ex. 9 at 17-18 (Kawakami Direct).

[85] Oncor/AEP Ex. 9 at 14 (Kawakami Direct).

[86] Oncor/AEP Ex. 9 at 18 (Kawakami Direct).

[87] Oncor/AEP Ex. 9 at 24 (Kawakami Direct).

[88] Oncor/AEP Ex. 9 at 24 (Kawakami Direct).

C. Community Values

The Commission has interpreted "community values" as "a shared appreciation of an area or other natural or human resource by members of a national, regional, or local community."[89] "[C]ommunity values may include landowner concerns and opposition."[90]

The Project area generally consists of rural, undeveloped land used primarily for oil and gas production, livestock grazing, and irrigated crop production.[91] A public open house meeting for the Project was held in Pecos, Texas on August 15, 2018, in accordance with 16 TAC § 22.252.[92] A total of 775 individual written notices of the open house meeting were sent to all property owners within 500 feet of the centerline of the preliminary alternative routes.[93] On August 9, 2018, notice of the open house meeting was published in the *Fort Stockton Pioneer*, a local newspaper of general circulation in Pecos County; the *Monahans News*, a local newspaper of general circulation in Ward County; and the *Pecos Enterprise*, a local newspaper of general circulation in Reeves County.[94] Oncor, on behalf of the Applicants, provided notice of the open house meeting to the Department of Defense.[95]

Halff received information at and following the public meeting, including a questionnaire submitted by a meeting attendee, electronic data received by a local official, and additional reconnaissance surveys. Based on that information, portions of 36 existing links were modified,

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[89] *Application of LCRA Transmission Services Corporation to Amend its Certificate of Convenience and Necessity for a 138-kV Transmission Line in Kerr County*, Docket No. 33844, Order at 15, Finding of Fact No. 65 (Mar. 4, 2008).

[90] *Application of LCRA Transmission Services Corporation to Amend its Certificate of Convenience and Necessity for the Gillespie to Newton 345-kV CREZ Transmission Line in Gillespie, Llano, San Saba, Burnet, and Lampasas Counties, Texas*, Docket No. 37448, Proposal for Decision at 14 (Mar. 18, 2010).

[91] Oncor/AEP Ex. 1 at 5.

[92] Oncor/AEP Ex. 1 at 19.

[93] Oncor/AEP Ex. 1 at 19.

[94] Oncor/AEP Ex. 1 at 19.

[95] Oncor/AEP Ex. 1 at 19.

and several were divided for a net increase of five alternative links.[96] The preliminary link modifications were made to, among other things, accommodate the City of Pecos water facilities, new oil and gas facilities, and other new construction.[97]

The primary landowner concerns raised through testimony and examination at the hearing focused on the effects of the Project on oil and gas production. Oxy and Concho in particular oppose Route 320 because of its potential effect on their production properties in the central corridor. For example, Oxy, urges the Commission "to make its routing decision with an eye toward minimizing the impact of this line on the densely packed and rapidly expanding oil and gas operations that make up the ***vast majority*** of the development in this study area."[98] Oxy expresses a number of health and safety concerns related to constructing or maintaining transmission lines close to its existing wells and active well-drilling operations, and the effect that outages would have on existing oil and gas infrastructure as a new transmission line is constructed and energized.[99] Oxy also argues that it will lose significant revenue and income if it cannot efficiently develop its fields or maintain existing wells.[100]

Concho emphasizes the benefits of Route 325 Modified over Route 320 Modified, arguing that Route 325 Modified: "impacts less oil and gas development, has one fewer habitable structure, greater than seven miles more paralleling existing transmission lines, more length paralleling existing right-of-way, parallels 0.8 miles less pipelines, less length through commercial and industrial areas, and has 4.393 miles more length through rangeland pasture."[101]

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[96] Oncor/AEP Ex. 1 at 19; Oncor/AEP Ex. 5 at 9 (Marusak Direct).

[97] Oncor/AEP Ex. 5 at 9-10 (Marusak Direct); Oncor/AEP Ex. 1, Attachment No. 1 at § 6.0.

[98] Oxy Initial Brief at 1 (emphasis added) citing Tr. at 40-41 (Marusak Cross); Oncor AEP Ex. 1, Application, Attachment 1, Environmental Assessment at 3-29 ("The bulk of the region is used for oil and gas production or range for livestock; cropland within the study area is less common and is limited to scatter irrigated fields.").

[99] Oxy Ex. 2 at 6, 8 (Mendoza Direct).

[100] Oxy Ex. 2 at 7-8 (redacted) (Mendoza Direct). Mr. Mendoza's un-redacted (Confidential) testimony at these pages states, among other things, the projected level of reduced revenues that Oxy would experience over the course of a year.

[101] Concho Initial Brief at 9. Route 320 Modified as supported by Oxy and Concho would modify the following links on Route 320: C2, F3/G4/G51/I12, and J1/J7; Route 325 Modified would modify the following links: C2, E1/F1, and K11. Oxy Ex. 3 at 3 (Mendoza Cross-Rebuttal).

The ALJs have considered Oxy's and Concho's concerns and would endorse Route 320 Modified if those parties had been able to obtain all landowner consents. Despite the points raised by Oxy and Concho, however, the ALJs do not recommend that the Commission approve Route 325, primarily because Route 325 is significantly longer, more expensive, raises more environmental concerns, and affects more wildlife habitat than Route 320. The record does not contain statements from the Applicants or others who support Route 320 rebutting Oxy's contentions regarding health, safety, and lost revenues that could occur if Route 325 Modified is not approved. The ALJs note, however, that Oxy's (and Concho's) concerns are predicated on situations in which they could not "efficiently develop" their fields.[102] The record does not suggest that the Applicants would engage in construction practices that would endanger the health and safety of oil and gas field personnel, or that the Applicants would construct Route 320 so close to existing oil and gas wellheads as to prevent safe and efficient production from those facilities. The record also does not indicate why production companies such as Oxy and Concho would be precluded from using current technology to drill as yet undeveloped wells to avoid close proximity to transmission lines.

While Oxy and Concho have obtained numerous landowner consents for modifications to Routes 325 and 320 that would ameliorate their concerns to at least some extent, they had not yet obtained all necessary land owner consents for modifications to either Route 325 or 320 as of the date the record closed in this docket.[103] As of March 19, 2019, the record does not support Route 320 Modified as proposed by Oxy and Concho. Similarly, the record does not support Route 325 Modified, even if its negative attributes as to cost, length, and impact on wildlife resources and other concerns could be overcome. The ALJs also cannot accept some of the modifications proposed by Oxy and Concho without all of their proposed modifications being available because the record does not indicate the effects that could result from a partially modified route.

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[102] *E.g.*, Oxy Ex. 2 at 7 (Mendoza Direct).

[103] As of March 19, 2019, for Route 325 Modified, Concho and Oxy had not obtained all landowner consents for Links K11 and E1/F1; for Route 320 Modified, they had not obtained all landowner consents for Links C2, J7, and F3/G4/G51/I2. *See* Oxy and Concho's Joint Motion to Admit Additional Evidence and Report on Landowner Consents at 2 (Mar. 19, 2019).

For these reasons, when weighing all community values and the evidence in the record, community values considerations favor Route 320 over all other routes.

D. Structures: Transmitters, Airports, Airstrips, and Irrigation Systems

The table below identifies the number of transmitters, airports, airstrips, and mobile irrigation systems potentially affected by Route 320:[104]

Route	320
Private airstrips within 10,000 feet of the centerline	0
FAA-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of the centerline	0
FAA-registered airports with no runway greater than 3,200 feet in length within 10,000 feet of the centerline	0
Heliports within 5,000 feet of the centerline	0
Commercial AM transmitters within 10,000 feet of the centerline	0
FM, microwave, and other electronic installations within 2,000 feet of the centerline	0
Agricultural cropland with mobile irrigation systems	0

The fact that none of these types of structures are close to Route 320 weighs in favor of Route 320. Route 41 is identical to Route 320 in that neither is close to any of these types of structures. Route 325 has one FAA-registered airport and one FM, microwave and/or other electronic installation near its route. Route 324 has two FM, microwave and/or other electronic installations near its route.[105]

[104] Oncor/AEP Ex. 1, Attachment 12, Table 2, at 2.

[105] TPWD's proposed Route 324 has two electronic installations within 2,000 feet, and Oxy/Concho's proposed Route 325 has one microwave tower within 2,000 feet. Oncor/AEP Ex. 1 at 24, 25.

E. Park and Recreational Areas

There are no parks or recreational areas within 1,000 feet of the centerline for any of the four referenced routes, including Route 320.[106]

F. Historical, Cultural, and Aesthetic Values

Under PURA, the Commission is required to consider historical and aesthetic values.[107]

1. Historical, Archeological, or Cultural Resources

The table below identifies historical, archeological, or cultural resources potentially affected by Route 320:[108]

Route	320
Recorded cultural resource sites crossed	0
Recorded cultural resources within 1,000 feet of the centerline	1
Length across areas of high archeological/historical site potential (feet)	63,063

The cultural resources within 1,000 feet of the Route 320 ROW are isolated to one, and no cultural resources are crossed. The length across areas of high archeological or historical site potential for Route 325 is 72,768 feet, for Route 41 is 62,797 feet, and Route 324 is 62,021 feet. Route 325 has 9,705 more feet of archeological or historical site potential areas crossed than Route 320. Route 41 has three recorded cultural resources within 1000 feet of its centerline, as compared to only one for Route 320.[109] Because there is a substantial amount of area crossed that is of high archaeological or historical site potential for all four routes, the ALJs agree with

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[106] Oncor/AEP Ex. 1, Attachment 12, Table 2.

[107] PURA § 37.056(c)(4)(C).

[108] Oncor/AEP Ex. 1, Attachment 12, Table 2, at 2.

[109] Oncor/AEP Ex. 1, Attachment 12, Table 2, at 1 - 2.

Commission Staff's recommendation that if any further archeological or cultural resources are found during construction of the proposed transmission line, the Applicants should immediately cease work in the vicinity of the archeological or cultural resources, and notify the Texas Historical Commission.[110]

2. Aesthetic Values

Aesthetic impacts or impacts to visual resources exist when the transmission ROW, lines, or structures of a transmission line system create an intrusion into, or substantially alter, the character of the existing view.[111] The table below illustrates the potential visual impact on roads and highways of Route 320:[112]

Route	**320**
ROW within foreground visual zone of U.S. and state highways (feet)	20,298
Number of U.S. or State Highways crossed	3
Number of Farm-to-Market, county road/local road crossed	13

Routes 41, 320, and 324 all have 20,298 feet of ROW within the foreground visual zone of U.S. and state highways. The ROW for Route 325 has 12,681 feet more than the other three routes. All four routes cross the same number of U.S. or state highways. Routes 320 and 41 cross 13 Farm-to-Market, county roads or local roads, while Route 324 crosses 10, and Route 325 crosses 9. Taking all of these considerations into account, the factors generally weigh out evenly across all four proposed routes, and Route 320 therefore compares favorably as to this aesthetic values factor.

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[110] Staff Ex. 2 (Bautista Direct) at 21.

[111] Docket No. 45866, Final Order on Rehearing at 16, Finding of Fact 60 (Jul. 28, 2017).

[112] Oncor/AEP Ex. 1, Att. 12 at Table 2, page 2.

G. Environmental Integrity

The EA analyzed the Project's possible impacts based on numerous environmental factors. The Applicants and Halff also performed an evaluation of the impacts of the Project on the environment, including endangered and threatened species.

The Applicants have committed that, during the construction of the Project, they will minimize the amount of flora and fauna disturbed, re-vegetate cleared and disturbed areas using native species and consider landowner preferences in doing so, exercise extreme care to avoid affecting non-targeted vegetation or animal life, and use best management practices to minimize the potential impact to migratory birds and threatened or endangered species.[113] Additionally, the Applicants will implement erosion control measures and return each affected landowner's property to its original contours and grades unless otherwise agreed to by the landowners.[114]

The table below reflects the impacts of Route 320 using quantitative environmental criteria:[115]

Route	**320**
Length of ROW across upland woodlands	0
Length of ROW across riparian areas (feet)	24,861
Length of ROW across potential wetlands (feet)	5,586
Number of stream crossings	16
Length of ROW across lakes or ponds (open waters) (feet)	80
Parallel to streams (within 100 feet)	1001
Number of known rare/unique plant locations within ROW	1
Length of ROW across known habitat of federally listed endangered or threatened species (feet)	63

[113] Oncor/AEP Ex. 12 at 13-16, 19 (Peppard Rebuttal).

[114] Oncor/AEP Ex. 12 at 18 (Peppard Rebuttal).

[115] Oncor/AEP Ex. 1, Attachment 12, Table 2, page 2.

Route	320
Length across rangeland pasture (feet)	192,570
Length through known habitat of threatened or endangered species (in feet)	63
Number of cultural resource sites crossed	0

Because Route 325 is longer than the other three routes, it typically will have higher length or crossing numbers for these environmental considerations. For example:

- Route 325 crosses 215 feet of open waters, as compared to 80 feet for Route 320;
- Route 325 crosses 35,256 feet of riparian areas, as compared to 24,861 feet for Route 320;
- Route 325 crosses 10,532 feet of known habitat of threatened or endangered species, as compared to 63 feet for Routes 320, 41 and 324;
- Route 325 also crosses one recorded cultural resource site, while Route 320 crosses none; but
- Route 325 crosses only 5,470 feet of potential wetlands, as compared to 5,586 feet for Route 320.[116]

With regard to these environmental factors, Route 320 is roughly equal to Route 41, and superior to Route 325.

H. Probable Improvement of Service or Lowering of Costs to Consumers

The proposed transmission facilities will not adversely affect other utilities' service in the area and will improve system reliability in the area.[117] Moreover, the Project is needed to satisfy reliability and load growth issues in the project area, and will result in improved service to electric customers.[118] The Commission is required to consider the probable improvement of

[116] Oncor/AEP Ex. 1, Attachment 12, Table 2 at 2.

[117] Oncor/AEP Ex. 9 at 19 (Kawakami Direct).

[118] *See, e.g.*, Oncor/AEP Ex. 9 at 24 (Kawakami Direct).

service and the lowering of cost to area consumers.[119] Oncor asserts that the Project is needed to satisfy load growth and reliability issues in the study area, and will improve service. Commission Staff agrees and, as explained above, the ALJs also agree.

I. Engineering Constraints

The area encompassing the Project is undergoing rapid development in energy infrastructure that may give rise to engineering constraints encountered during project design and construction.[120] The Applicants, with the support of Oxy and Concho, support what they refer to as a "narrower grant of post-approval routing flexibility" to avoid engineering constraints, particularly in the context of working around oil and gas pad sites and facilities.[121] The Applicants, however, state that they are not aware of any engineering constraints or construction impediments affecting the currently proposed route modifications that likely could not be resolved through additional consideration during the design and construction phase of the project.[122] Because the ALJs are recommending approval of Route 320 with only an agreed modification to Link B2, there does not appear to be the need for additional flexibility that might be necessary to accommodate other modified links. For this reason, the ALJs do not recommend a deviation from the Commission's current precedents regarding engineering constraints.

J. Costs

Route 320, estimated to cost $98,220,000, is the least expensive of all the 29 routes considered. Not accounting for station improvement costs, which are the same regardless of route, Route 320 is approximately $1.6 million less expensive than Route 41, $7 million less expensive than Route 324, and $18.1 million less expensive than Route 325.[123] Oncor estimates

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[119] PURA § 37.056(c)(4)(E).

[120] *E.g.*, Tr. at 89 (Mendoza Cross).

[121] *E.g.*, Oncor/AEP Texas Initial Brief at 18-19.

[122] Oncor/AEP Ex. 12 (Peppard Rebuttal) at 11-12.

[123] Oncor/AEP Ex. 1, Attachment 3 at 3.

that the modifications at the Sand Lake Switch will cost approximately $17.6 million.[124] AEP Texas estimates that the modifications to the Solstice Switch will cost approximately $10.1 million.[125]

Oncor intends to finance its portion of the transmission facilities with a combination of debt and equity in compliance with its authorized capital structure.[126] AEP Texas intends to finance its portion of the transmission facilities with a combination of debt and equity.[127] Applicants propose splitting ownership of the Project evenly.[128] The ALJs find that Route 320 is the preferable route from a cost perspective.

K. Moderation of Impact on Affected Community and Landowners

This criterion is similar to the "Community Values" criterion discussed above. The impact on the community and landowners, and in particular on the parties who expressed the greatest concern for their interests in the proposed Project, is discussed in additional detail in this section. Oxy, Concho, and Plains Pipeline are the non-Applicant intervenors who expressed the greatest concern regarding the impact the Project would have on their properties. Oxy and Concho, as noted, strongly prefer Route 325 Modified as the best route to avoid their oil and gas production properties. Concho notes, for example, that Route 320 Modified, as compared to Route 325 Modified, impacts less oil and gas development.[129] Oxy argues that the additional cost associated with Route 325 Modified is justified by the "benefits associated with avoiding the dense and rapidly expanding oil and gas production areas that would be bisected by the central corridor routes."[130] Oxy adds that the cost differential between Route 325 Modified and the

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[124] Oncor/AEP Ex., Attachment 3 at 3.

[125] Oncor/AEP Ex., Attachment 3 at 3.

[126] Oncor/AEP Ex. 1 at 8.

[127] Oncor/AEP Ex. 1 at 8.

[128] Oncor/AEP Ex. 1 at 9.

[129] Concho Initial Brief at 9.

[130] Oxy Initial Brief at 11.

central corridor routes "do not factor the expense of resolving any unanticipated engineering constraints that the utilities might encounter as they attempt to build this line through a densely packed oil field," and "the estimates do not account for any costs associated with condemning mineral interests or expensive oil and gas infrastructure."[131]

As to Concho's arguments, the record shows that Route 320 is superior to Route 325 Modified with regard to the majority of relevant criteria, including cost, length, and effect on environmental and wildlife resources. Further, Oxy's arguments are speculative and assume without explanation that mineral interests would need to be condemned to build an above-ground transmission line. These same speculative concerns would apply, if they applied at all, to any route through oil and gas production fields. This includes Route 325, although Route 325 is not as dense as Route 320. Issues will arise regardless of the route selected. In any event, the ALJs cannot recommend Route 325 Modified (or Route 320 Modified) because Oxy and Concho were unable to obtain all landowner consents necessary to implement those modified routes.

As to Plains Pipeline's concerns, its proposed modification to Link B2 will reduce the number of habitable structures on Route 320 from 38 to 26. While Route 320 will have a greater number of habitable structures within 500 feet of its centerline than Route 41, Route 320 will avoid crossing two of Plains Pipeline's crude oil pipelines, and avoid crossing existing transmission lines three times.[132] Taking into account the adverse effect that Route 41 would have on Plains Pipeline, the greater benefits of Route 320, and the fact that the great majority of the habitable structures that are on Route 320 are mobile home "man camps" as discussed in more detail below, the ALJs conclude that the benefits and attributes of Route 320 outweigh those of Route 41.

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[131] Oxy Initial Brief at 11.

[132] Tr. at 55-56, 59-60 (Peppard Cross) (Feb. 21, 2019); Oncor/AEP Ex. 1, Attachment 1, Appendix G.

L. Use of Compatible ROWs, Paralleling of Existing ROWs, and Paralleling of Property Lines

The following table reflects Route 320's use of existing compatible ROWs parallel to existing compatible ROWs or property lines:[133]

Route	320
Total length of route (miles)	44.5
Length of ROW parallel to existing transmission line ROW (feet)	10,149
Length of ROW parallel to railways	0
Length of ROW parallel to roads/highways (feet)	16,287
Length of ROW parallel to pipelines (feet)	1,244
Length of ROW parallel to apparent property boundaries (feet)	44,365
Length of ROW parallel to existing compatible ROW (feet)	63,940

Route 320 is parallel to existing compatible corridors, including existing transmission lines, public roads and highways, railroads, and apparent property boundaries, for approximately 27.2% of its length, compared to 26.4% for Route 41, 48.6% for Route 325, and 37.9% for Route 324.[134] The range of alternative routes paralleling existing compatible ROW is 17.3% to 48.6%.[135] Considering these factors, the ALJs find that Route 320 makes acceptable use of existing compatible ROW, and parallels existing ROW and property lines.

M. Prudent Avoidance

The term "prudent avoidance" is defined in 16 TAC § 25.101(a)(6) as the "limiting of exposure to electric and magnetic fields that can be avoided with reasonable investment of money and effort." The term "habitable structure" is defined in 16 TAC § 25.101(a)(3) to include "mobile homes." While Route 320 has 38 habitable structures within 500 feet of the

[133] Oncor/AEP Ex 1, Attachment 12, Table 2 at 2.

[134] Staff Ex. 2 (Bautista Direct) at 28-29.

[135] Staff Ex. 2 (Bautista Direct) at 28-29.

route centerline, 34 of these 38 structures are mobile living or office units that are temporarily in place and appear to have no permanent foundations, and 32 mobile living units are of the travel trailer style.[136] These habitable structures are often referred to as "man camps," which are temporary living or office quarters for oil and gas field personnel.[137] For Routes 320, 324 and 325, 34 of these structures are clustered in two man camps just west of Link B2.[138]

Commission Staff prefers Route 41 primarily because it has only three habitable structures within 500 feet of the Route 41 centerline, "which helps minimize the impact on residential areas and maximize the distance from residences."[139] Commission Staff acknowledges the "mobile, transient nature" of these structures, but counters that these man camps could just as easily increase in size, rather than decrease in size and, regardless, the Commission's rule does not provide any basis for "unequal treatment of habitable structures based on the type of habitable structure."[140]

The ALJs acknowledge that 16 TAC § 25.101(a)(3) does not distinguish different categories of prudent avoidance based on the type of habitable structure, and the mobile homes used as quarters for oil field personnel are, by definition, habitable structures. The ALJs are less concerned over whether the man camps could grow in the future after a transmission line is installed in the vicinity because potential future growth of these camps would occur with knowledge that the transmission line was already there. The ALJs recommend, however, that the prudent avoidance consideration should account for the nature and purpose of these habitable structures in the west Texas oil and gas fields. These are not permanent mobile home developments or, for the most part, structures that serve as family dwelling units or weekend

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[136] Oncor/AEP Ex. 1, Attachment 12.

[137] Tr. at 64-65 (Perkins Cross) (February 21, 2019): "[T]hey have wheels on them, they have hitches, there's no utilities running to these units. So they are very temporary in nature.... [W]e go out a couple of weeks later and there might be – in this one instance, there was a third less [of the structures] at the time." *See also* Oncor/AEP Ex. 7 (Perkins Direct) at Exhibit BJP-6.

[138] Oncor/AEP Ex. 1, Attachment 1, Appendix G. *See* Diagram 1 in the Introduction and Summary of this PFD.

[139] Staff Initial Brief at 14, citing Oncor/AEP Ex. 7 (Perkins Direct) at Ex. BJP-5; Oncor/AEP Ex. 11 (Murasak Rebuttal) at Ex. RJM-R-7.

[140] Staff Initial Reply Brief at 8.

cabins. Most of them can easily be moved to other areas in the production fields if exposure to electromagnetic fields becomes an actual concern. No party to this case who lives or works in the vicinity of Route 320 expressed a concern regarding electromagnetic interference. Further, although Route 41 has many fewer habitable structures near its proposed route, it has other negative considerations with regard to Plains Pipeline's interests, as addressed above.

Although not a complete cure to Commission Staff's points regarding habitable structures, Plains Pipeline's proposal to modify the corner of Link B2 would place 12 of the 34 structures along that link outside the 500-foot boundary. Under Plains Pipeline's proposal, the northwestern corner of Link B2, which involves a 90-degree turn, would be avoided by bisecting that corner of Link B2 and following an existing pipeline ROW in a north-to-south direction across Plains Pipeline's property.[141] This would place 12 of the habitable structures (clustered in one man camp) more than 500 feet from the transmission line. The remaining 22 structures, clustered in the second, more southern man camp, would still be within 500 feet, but most of those would be farther from the centerline with this modification. The ALJs assume that this modification would not increase the cost to Link B2 and Route 320 because it is essentially using the hypotenuse of a right triangle as its length, rather than the two legs of the right triangle. It does involve two angled turns in the line, but avoids a 90-degree turn that otherwise exists on the unmodified Link B2.

For these reasons, the ALJs recommend that the prudent avoidance concerns raised with regard to Link B2 on Route 320 should not outweigh the negative effects of Route 41, including the multiple oil pipeline and transmission lines crossings and greater cost that apply with Route 41.

[141] The best rendition of this modification is shown on Figure 1 in Plains Pipeline's Response to Order No. 11 filed in this docket on March 19, 2019, which is close up view of "Map Insert 2" from Oncor/AEP Ex. 1, Attachment 1, Appendix G (Oncor/AEP Ex. 10A).

N. Alternative Routes or Facility Configurations

1. Specific Alternatives and Cost

Issue Number 5 in the Order of Referral and Preliminary Order asks:

Are there alternative routes or facilities configurations that would have a less negative impact on landowners? What would be the incremental cost of those routes?

The ALJs have previously addressed at some length the modifications to Routes 325 and 320 proposed by Oxy and Concho. Because the record does not show that land owner consents have been obtained for all of their proposed modifications on either route, the ALJs have restricted their analysis to the unmodified routes addressed at the hearing and through briefs and, to some extent, TPWD's preferred Route 324. The Applicants, however, have provided testimony that addresses the impacts of the proposed modifications to Routes 320 and 325 as to cost and the environment. As to Route 320, the modification to Link C2 would increase cost by approximately $906,000; the modification to Links F3, G4, G51, and G52 would not impact the Project estimated cost, and the modification to Links J1 and J7 would increase cost by approximately $600,000.[142] As to Route 325, the modification to Link D31 would not impact the Project estimated cost; and the modification to Link K11 would increase cost by approximately $68,000. In sum, the modifications to Route 320 would increase costs by approximately $1.5 million, and there would be a relatively small increase to Route 325. Regardless, these modifications would increase the cost of the lines These are increases in cost, and there is no evidence to show that these modifications would otherwise have a more positive or negative impact on landowners.

[142] Oncor/AEP Ex. 12 at 12 (Peppard Rebuttal).

2. Landowner Contributions

Issue Number 6 in the Order of Referral and Preliminary Order asks:

If alternative routes or facilities configurations are considered due to landowner preference:

a) Have the affected landowners made adequate contributions to offset any additional costs associated with the accommodations?

b) Have the accommodations to landowners diminished the electric efficiency of the line or reliability?

There is no evidence in the record indicating that parties requesting route modifications have made, or are willing to make, contributions to offset any additional costs associated with the modifications. The ALJs note that Route 325, even with modifications, is significantly more expensive in terms of construction costs than are the estimated costs for Routes 41, 320, or 324. The record also does not suggest that the requested modifications would diminish the electric efficiency or reliability of the transmission line.

VI. TEXAS PARKS AND WILDLIFE DEPARTMENT

Issue Number 7 in the Order of Referral and Preliminary Order asks:

On or after September 1, 2009, did the Texas Parks and Wildlife Department provide any recommendations or informational comments regarding this application pursuant to Section 12.0011(b) of the Texas Parks and Wildlife Code? If so, please address the following issues:

a) What modifications, if any, should be made to the proposed project as a result of any recommendations or comments?

b) What conditions or limitations, if any, should be included in the final order in this docket as a result of any recommendations or comments?

c) *What other disposition, if any, should be made of any recommendations or comments?*

d) *If any recommendation or comment should not be incorporated in this project or the final order, or should not be acted upon, or is otherwise inappropriate or incorrect in light of the specific facts and circumstances presented by this application or the law applicable to contested cases, please explain why that is the case.*

In accordance with Parks and Wildlife Code § 12.0011, TPWD provided recommendations and informational comments to the Commission with the objective of minimizing the adverse impacts to the state's fish and wildlife resources in the routing, construction, and operation of the Project.[143]

TPWD's letter recommends certain construction practices, such as fencing, covering, soil stabilization, and species exclusion techniques, as well as facility modifications such as bird diverters and covered energized components. These recommendations and Applicants' incorporation of many of them as part of their standard practices are detailed in the Applicants' rebuttal testimonies.[144] Some of TPWD's recommendations would substantially impair the construction timeline of this critical reliability project. One such example is TPWD's recommendation to refrain from clearing activities for approximately six months of the year.[145] Based on the ERCOT determination and record in this case, the ALJs agree with Oncor and recommend that the Commission not adopt TPWD's request on this point.

TPWD further recommends certain practices associated with migratory birds as well as threatened, endangered, and rare species. Applicants commit that they will comply with the Migratory Bird Treaty Act, the Endangered Species Act, and other applicable federal and state laws pertaining to these species.[146] The ALJs have included the standard ordering language on migratory birds and raptors in the proposed order.

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[143] *See* TPWD Letter (Jan. 15, 2019).

[144] Oncor/AEP Ex. 12 at 12-20 (Peppard Rebuttal), Ex. 14 at 7-8 (Reynolds Rebuttal).

[145] Oncor/AEP Ex. 12 at 15 (Peppard Rebuttal).

[146] Oncor/AEP Ex. 12 at 17 (Peppard Rebuttal).

TPWD's comment letter addressed issues relating to impacts on ecology and the environment, but did not consider other factors the Commission and the Applicants must consider in CCN applications.[147] Consistent with the testimony of Commission Staff witness David Bautista, the ordering paragraphs historically adopted by the Commission in transmission line CCN cases should be adopted in this case, including those relating to environmental issues.[148] The ALJs do not recommend that the Commission adopt TPWD's other or more expansive recommendations or comments.

TPWD recommended Route 324, arguing that it appears to best minimize adverse impacts to natural resources while maintaining a shorter route length and paralleling existing corridors for a portion of the route.[149] As explained above, while Route 324 best minimizes adverse impacts on natural resources, Route 320 does not significantly increase those impacts, and TWPD's analysis does not account for numerous other issues that must be considered in a CCN proceeding. Accordingly, the ALJs conclude that Route 320 is adequate with regard to wildlife resources and habitat.

VII. OTHER ISSUES

Issue Number 8 in the Order of Referral and Preliminary Order asks:

Are the circumstances for this line such that the seven-year limit discussed in section III of this order should be changed?

The Applicants did not identify any circumstances that would support modifying the seven-year deadline for them to commercially energize the transmission line. Therefore, the default seven-year limit should be sufficient for the Applicants to safely and reliably construct

[147] TPWD Letter at 4 (Jan. 15, 2019).

[148] Oncor/AEP Ex. 12 at 15, 17 (Peppard Rebuttal).

[149] TPWD Letter at 5 (Jan. 15, 2019).

and energize the line. Should additional time be required, Applicants state that they will request an extension from the Commission in advance.[150]

VIII. CONCLUSION

The ALJs recommend that the Commission approve Route 320, with a modification to Link B2 discussed above. This route, as modified at Link B2, is supported or not opposed by the Applicants, Plains Pipeline, the Forrister Generation-Skipping Trust, and Alan Zeman. While TPWD recommended Route 324, TWPD did not file a statement or testimony supporting its preferred route. Oxy and Concho oppose Route 320, and instead prefer Routes 325 Modified, Route 325, or Route 320 Modified, in that order. All necessary landowner consents for Oxy and Concho's proposed modifications, however, were not received in the record as of March 19, 2019, and a number of other countervailing factors such as cost, length, and effects on the environment and wildlife resources favor Route 320 over the alternatives supported by Oxy and Concho. In support of the ALJs' recommendation that the Commission approve Route 320 with the minor modification to Link B2, the ALJs propose the following findings of fact, conclusions of law, and ordering provisions.

IX. FINDINGS OF FACT

Applicants

1. Oncor Electric Delivery Company LLC (Oncor) is an investor-owned electric utility providing service under certificate of convenience and necessity (CCN) number 30158.

2. AEP Texas Inc. (AEP Texas) is an investor-owned electric utility providing service under CCN number 30170.

[150] Oncor/AEP Initial Brief at 25.

Joint Application

3. On November 7, 2018, Oncor and AEP Texas (together, the Applicants) filed with the Public Utility Commission of Texas (Commission) a joint application (Application) to amend their CCNs for the proposed Sand Lake to Solstice double-circuit 345-kilovolt (kV) transmission line (the Sand Lake-to-Solstice Project) in Pecos, Reeves, and Ward counties. The Application was assigned Docket No. 48785.

4. The Applicants retained Halff Associates, Inc. (Halff) to perform and prepare an Environmental Assessment and Alternative Route Analysis (EA) for the Sand Lake-to-Solstice Project.

Procedural History

5. On November 7, 2018, the Applicants filed the direct testimony of their witnesses: Russell Marusak; Wilson Peppard; Thomas Reynolds, III; Brenda Perkins; and Brent Kawakami. AEP Texas filed corrected direct testimony of Thomas Reynolds, III, on November 29, 2018.

6. On November 7, 2018, the Applicants as well as LCRA Transmission Services Corporation (LCRA TSC) filed a motion to consolidate the consideration of this project with AEP Texas's and LCRA TSC's proposed Bakersfield-to-Solstice 345-kV transmission line project (the Bakersfield-to-Solstice Project) originally filed in Commission Docket No. 48787, to issue a protective order, and to refer this matter to the State Office of Administrative Hearings (SOAH).

7. On November 14, 2018, the Commission issued an order of referral and preliminary order, referred this matter to SOAH, and identified a number of issues to be addressed.

8. On November 15, 2018, the SOAH administrative law judges (ALJs) issued Order No. 1 establishing the intervention deadline, consolidating Docket Nos. 48785 and 48787 into Docket No. 48785, providing notice of a prehearing conference, describing jurisdiction, and providing other information.

9. On December 10, 2018, the SOAH ALJs issued Order No. 2 providing notice that the hearing on the merits would convene at the SOAH offices in Austin, Texas at 9:00 a.m. on February 15, 2019, and continuing on February 19-22, 2019. Also in Order No. 2, the ALJs granted the motions to intervene filed by Alan Zeman (Zeman), Oxy (comprised of Occidental Permian Ltd.; Oxy Delaware Basin, LLC; Oxy USA Inc.; Oxy USA WTP LP; Houndstooth Resources, LLC; and Occidental West Texas Overthrust, Inc.), the City of Garland, Elizabeth Graybill, and Mary Graybill-Rees.

10. Barbour, Inc. filed a statement of position on January 8, 2019. Zeman and Dwight Forrister, on behalf of the Forrister Generation-Skipping Trust (Forrister), filed direct testimony on January 9, 2019. Charles H. Midgely filed direct testimony on behalf of Plains Marketing, L.P. and Plains Pipeline, L.P. (together, Plains Pipeline) on January 10, 2019. Albert Mendoza filed direct testimony on behalf of Oxy on January 10, 2019. Terry Burkes filed direct testimony on behalf of COG Operating LLC (Concho) on January 10, 2019. Other testimony was filed in the consolidated docket relating to the Bakersfield to Solstice Project.

11. On January 15, 2019, the SOAH ALJs issued Order No. 3 granting intervenor status to the following parties interested in the Sand Lake-to-Solstice Project: Cross V Ranch, LP; Barbour, Inc.; Forrister; Plains Pipeline; and Concho. Other intervenors granted party status who only had an interest in the Bakersfield-to-Solstice Project were: MMSmithfield Family Limited Partnership, Ltd.; Pettus Czar, Ltd.; Atmos Pipeline-Texas; Esther Dudley, MMEX Resources Corporation; Domingo Perez; Brockett & McNeel LLP; Kevin Wilson; and Dale and Dorothy Smit. SOAH Order No. 3 also granted the City of Garland's motion to withdraw as a party to this case.

12. On January 15, 2019, the Texas Parks and Wildlife Department (TPWD) filed a letter regarding the proposed transmission facilities and made various comments and recommendations.

13. On January 18, 2019, Commission Staff filed an objection to and motion to strike portions of certain intervenors' direct testimony regarding: (1) electromagnetic fields and associated health concerns; (2) anticipated future uses of property or diminution in property values; and (3) construction-related transmission outages. Alternatively, Commission Staff requested that these portions of direct testimony be accorded appropriate evidentiary weight if found to be general statements of concern.

14. On January 18, 2019, the Applicants and LCRA TSC filed a joint letter, in compliance with SOAH Order No. 3, identifying the intervenors who did not file direct testimony or a statement of position as of the date of the letter.

15. On January 24, 2019, the SOAH ALJs issued Order No. 4 identifying intervenors who failed to file testimony or a statement of position by the January 10, 2019, deadline and proposing to remove these intervenors as parties to the proceeding.

16. On January 30, 2019, the SOAH ALJs issued Order No. 5, which overruled Commission Staff's objections and denied the motion to strike but granted its alternative request, determining that the challenged testimony would be considered intervenor statements of concern and given the appropriate evidentiary weight.

17. On January 30, 2019, Commission Staff filed the direct testimony of its witness, David Bautista, regarding the Sand Lake-to-Solstice Project.

18. On February 4, 2019, Concho filed the cross-rebuttal testimony of Brent Lowery, and Oxy filed the cross-rebuttal testimony of Albert Mendoza.

19. On February 6, 2019, the Applicants filed the rebuttal testimony of Russell Marusak; Wilson Peppard; Thomas Reynolds, III; and Brenda Perkins.

20. On February 6, 2019, the Applicants and LCRA TSC moved to admit the direct testimony of Brent Kawakami into the evidentiary record because there was no challenge to the need for either project.

21. On February 8, 2019, the SOAH ALJs issued Order No. 6, which cancelled the need phase of the hearing on the merits, scheduled a prehearing conference in its place, and admitted into evidence Brent Kawakami's testimony supporting the need for both the Sand Lake-to-Solstice and Bakersfield-to-Solstice Projects.

22. On February 19, 2019, the hearing on the merits concerning routing of the Bakersfield-to-Solstice Project was held, at which the parties introduced their pre-filed testimony and other materials into evidence. Applicants and LCRA TSC also filed a unanimous stipulation agreeing to the need for both the Bakersfield-to-Solstice Project and the Sand Lake-to-Solstice Project, which was signed by all parties in the consolidated docket.

23. On February 20, 2019, the SOAH ALJs issued SOAH Order No. 9, dismissing the following parties from the consolidated docket for failure to file testimony or statements of position in accordance with the requirements of SOAH Order No. 2: Cross V. Ranch, L.P.; Domingo Perez; MMEX Resources Corporation; Ester Dudley; Kevin Wilson; and Brockett & McNeel LLP.

24. On February 21, 2019, the hearing on the merits concerning routing for the Sand Lake-to-Solstice Project was held, at which the parties introduced their pre-filed testimony and other materials into evidence, and live testimony was presented.

25. On February 22, 2019, the SOAH ALJs issued Order No. 10, severing the Bakersfield-to-Solstice Project from consolidated Docket No. 48785 and remanding the application for the Bakersfield-to-Solstice Project to the Commission to consider in light of the parties' settlement of that matter.

26. Parties filed initial briefs on March 5 and 6, 2019, and reply briefs on March 12, 2019.

27. On March 12, 2019, Concho filed a motion to admit landowner consent agreements and to keep the record open until March 19, 2019, to allow it time to receive and file additional landowner consent agreements. On the same date, Oxy filed a motion to admit landowner consent agreements and joined Concho in requesting that the record remain open until March 19, 2019.

28. On March 13, 2019, the ALJs issued Order No. 11, which granted the Concho and Oxy motions to admit landowner consent agreements, extended the record close date to March 19, 2019, and required Concho, Oxy, and Plains Pipeline to file reports indicating which proposed modifications to Routes 320 and 325 have received landowner consents.

29. On March 19, 2019, Concho and Oxy filed a joint motion to admit additional landowner consents, but also reported that they had not yet obtained all landowner consents for their proposed modifications to Routes 320 and 325.

30. On March 19, 2019, Plains Pipeline filed a report stating that it agreed to the relocation of Link B2 to follow the west side of the ROW shown on the maps.

31. The evidentiary record closed in this docket on March 19, 2019.

32. On March 25, 2019, the ALJs issued Order No. 12, which admitted Concho Exhibit 5 and Oxy Exhibit 7-2 filed on March 19, 2019.

Description of the Transmission Line

33. The Sand Lake-to-Solstice Project consists of a new double-circuit 345-kV line to be generally built on lattice steel tower structures, extending from Oncor's Sand Lake Switch Station in Ward County to AEP Texas's Solstice Switch Station in Pecos County.

34. The Sand Lake-to-Solstice Project is approximately 44.5 to 58.7 miles in length, depending on the selected route.

35. The Sand Lake-to-Solstice Project also includes station work at the Sand Lake and Solstice Switches.

36. The Applicants will own, operate, and maintain their respective portions of the transmission line facilities including conductors, wires, structures, hardware, and easements.

37. The Application identified Route 320 as the route that the Applicants believe best meets the requirements of the Public Utility Regulatory Act and the Commission's rules, in addition to 28 other reasonable, feasible alternative routes, which the Applicants and Halff identified from among 408 preliminary alternative routes Halff developed in its EA filed with the Application.

38. The routes are based on a right-of way (ROW) width of approximately 160 feet. None of the necessary ROW has been acquired to date.

39. Route 320 is approximately 44.5 miles in length and is the shortest alternative route.

40. The estimated construction costs of the alternative routes range from approximately $98,220,000 to $126,903,000, excluding station costs.

41. Route 320 is the least expensive alternative route and is $28,683,000 less expensive than the most expensive alternative route.

42. All 29 routes identified in the Application are viable, feasible, and reasonable from a land use, environmental, engineering, and cost perspective.

43. Applicants identified Route 320 as the route that best addresses the Commission's routing criteria.

Notice and Sufficiency of Application

44. On November 7, 2018, the Applicants provided written notice of the filing of the Application, including a link table, route descriptions, and maps: (1) to each county government in which any portion of the proposed facilities may be located; (2) to each municipality within five miles of the proposed facilities; (3) to each neighboring utility service within five miles of the proposed facilities; (4) to the Texas Office of Public Utility Counsel (OPUC); (5) to the United States Department of Defense Siting Clearinghouse (DOD); (6) to certain pipeline owners/operators; (7) by first-class mail to each owner of land as stated on current county tax roll(s) that the Sand Lake-to-Solstice Project will directly affect if the requested certificate is granted. Applicants also provided a copy of the EA to TPWD.

45. On November 20, 2018, the Applicants filed an affidavit attesting to, among other things, their provision of a copy of the EA to the TPWD and notice of the application to OPUC, municipalities, counties, neighboring utilities, the DOD, and directly affected landowners.

46. On November 26, 2018, Commission Staff recommended that the Applicants' application be deemed sufficient.

47. On November 28, 2018, the Applicants filed an affidavit attesting to notice of the Application published on November 15, 2018, in newspapers having general circulation in the counties where the CCN is being requested, including the *Monahans News* (Ward County), the *Fort Stockton Pioneer* (Pecos County), and the *Pecos Enterprise* (Reeves County).

48. On December 6, 2018, Commission Staff recommended that Applicants' notice be deemed sufficient.

49. On December 10, 2018, in SOAH Order No. 2, the SOAH ALJs found the Application to be sufficient and materially complete.

50. On December 10, 2018, in SOAH Order No. 2, the SOAH ALJs approved of the Applicants' provision of notice of the Application in this proceeding.

51. On January 14, 2019, the Applicants filed a supplemental affidavit attesting to re-sent notices provided to certain directly affected landowners.

52. On January 24, 2019, in SOAH Order No. 4, the ALJs approved the Applicants' supplemental notice affidavit as compliant with Commission rules.

53. No party challenged the sufficiency of the Application.

Route Adequacy

54. The Applicants, together with their routing consultant, Halff, developed, evaluated and filed 29 geographically diverse alternative routes with the Application.

55. No party raised a route adequacy challenge.

56. The Application's 29 geographically diverse routes are an adequate number of reasonably differentiated alternative routes to conduct a proper evaluation.

Public Input

57. To develop information on community values for the transmission facilities, the Applicants held a public open house meeting for the Sand Lake-to-Solstice Project in Pecos, Texas on August 15, 2018, in accordance with 16 Texas Administrative Code (TAC) § 22.52.

58. The Applicants mailed a total of 775 individual written notices of the public open house meeting to all owners of property within 500 feet of the centerline of each preliminary alternative segment.

59. Oncor, on behalf of the Applicants, provided the DOD with notice of the public meeting.

60. On August 9, 2018, notice of the public open house meeting was published in the *Fort Stockton Pioneer*, a local newspaper of general circulation in Pecos County; the *Monahans News*, a local newspaper of general circulation in Ward County; and the *Pecos Enterprise*, a local newspaper of general circulation in Reeves County.

61. A total of nine people signed in as attending the public open house meeting, including one member of the local media and one local official.

62. Attendees of the public open house meeting were provided questionnaires. One person submitted a questionnaire at the public open house meeting, and electronic data was received from the local official attendee after the meeting.

63. The public feedback the Applicants received from the public open house meeting and from local, state, and federal agencies was evaluated and considered in determining the routes to be included in the Application. Based on input, comments, information received at and following the public open house meeting, and additional analyses conducted by the Applicants and Halff, revisions were made to the preliminary alternative route analysis.

64. On September 17, 2018, the DOD informed the Applicants that its informal review concluded that the Sand Lake to Solstice Project would have minimal impact on military operations in the area.

65. Based on information Halff received from the public involvement program, in consultation with the Applicants, and subsequent reconnaissance surveys, portions of 36 existing preliminary route links were modified, and several were divided for a net increase of five alternative links.

Adequacy of Existing Service and Need for the Transmission Line

66. The Sand Lake-to-Solstice Project is needed to: (1) support load growth in the Far West Texas area; (2) address reliability violations under Electric Reliability Council of Texas (ERCOT) reliability criteria and North American Electric Reliability Corporation (NERC) reliability standards; and (3) provide the infrastructure necessary to facilitate future transmission system expansion to continue to support that load growth.

67. The Far West Texas area is experiencing rapidly growing load due primarily to oil and natural gas production, processing, and transportation, as well as associated economic expansion. On the nearby Culberson Loop transmission lines, between 2012 and 2017 the load rose from 29.3 megawatts (MW) to 246.4 MW.

68. Based solely on actual load increases for Oncor substations and confirmed customer load increases (based on financially committed customer contracts), loads on the Culberson Loop lines are expected to increase significantly, with projected 2019 non-coincident summer peak load on these lines of 902 MW, and ultimately 1,549 MW of projected non-coincident summer peak load on these lines by 2022.

69. If the load projection parameters are expanded to take into account pending requests that are currently being studied and contractually negotiated between Oncor and customers, there is a probable likelihood of even further growth for non-coincident summer peak loads; current projections estimate that, for 2020, the non-coincident summer peak load will grow to 1,406 MW; for 2021, will grow to 1,563 MW; and for 2022, will grow to 1,639 MW.

70. In April 2016, the Applicants submitted for review by ERCOT's Regional Planning Group (RPG), an independent organization under PURA § 39.151, a suite of projects known as the "Far West Texas Project."

71. ERCOT performed steady state and dynamic stability power flow studies during its review of the Far West Texas Project and found multiple violations under NERC Reliability Standard TPL-001-4.

72. ERCOT's steady state analysis when reviewing the Far West Texas Project identified the following violations: thermal violations on multiple lines in the Barilla Junction Area under single contingencies in both generation cases it studied; unsolvable contingencies; and various voltage violations and unacceptable voltage deviations in the Culberson Loop under one or both cases studied.

73. ERCOT conducted detailed analyses and tests of four short-listed options and, in June 2017, ERCOT's Board of Directors endorsed construction of, among other things, a new 345-kV transmission line extending from Bakersfield to Solstice, to be built by LCRA TSC and AEP Texas on double-circuit-capable 345-kV structures with one 345-kV circuit initially installed, and expansion of Solstice to include the installation of a 345-kV ring-bus arrangement with two 600 MVA, 345/138-kV autotransformers.

74. In February 2018, Oncor submitted a suite of projects known as the "Far West Texas Project 2" to the ERCOT RPG.

75. ERCOT conducted a review of the Far West Texas Project 2, found multiple reliability violations under NERC Reliability Standard TPL-001-4, and conducted detailed analyses of three short-listed options. In June 2018, ERCOT's Board of Directors endorsed construction of, among other things, a variation of the proposed Far West Texas Project 2 to include the Sand Lake-to-Solstice double-circuit 345-kV line, expansion of the Sand Lake Switch and additions at the Solstice Switch, and a second circuit on the Bakersfield-to-Solstice line, and it endorsed them as Tier 1 transmission projects needed to support the reliability of the ERCOT transmission system. Further, ERCOT's Board of Directors endorsed the proposed transmission facilities as critical to the reliability of the ERCOT transmission system pursuant to 16 TAC § 25.101(b)(3)(D).

76. The Commission's certification rule, 16 TAC § 25.101(b)(3)(A)(ii)(I), states that ERCOT's recommendation shall be given great weight in determining the need for a proposed transmission line project.

77. As approved by ERCOT, the Far West Texas Project 2 includes the following components relevant to the Sand Lake-to-Solstice Project: (i) expansion of the Sand Lake Switch Station to install two new 600 MVA, 345/138-kV autotransformers as well as additions at the Solstice Switch Station; and (ii) construction of an approximately 40-mile, 345-kV transmission line on double-circuit structures, with two circuits in place between Sand Lake and Solstice.

78. During the course of its reviews, ERCOT evaluated numerous alternatives based on variations of different transmission solutions before endorsing the proposed transmission facilities as components of ERCOT's overall recommended transmission solution.

79. ERCOT used cost and reliability performance comparisons to further narrow its analysis to several short-listed options to resolve the identified NERC violations, each of which included the Sand Lake-to-Solstice Project.

80. The Sand Lake-to-Solstice Project will facilitate robust wholesale competition by facilitating the delivery of economical electric power at 345-kV from existing and future generation resources located both inside and outside of the project study areas to existing and future electric customers in those areas.

81. The Sand Lake-to-Solstice Project is not proposed to interconnect new transmission service customers.

82. Electric customers within the area of the Sand Lake-to-Solstice Project and other customers in the ERCOT system will benefit from the improved transmission system reliability and capacity provided by the proposed transmission facilities.

83. Voltage upgrades, conductor bundling, and additional transformers were each considered and rejected as inadequate alternatives.

84. Distribution alternatives to the Sand Lake-to-Solstice Project were considered and rejected because they would not improve the reliability and operational capability of the transmission system in the area.

85. All existing transmission facilities in the study areas were constructed and operate at 138-kV, and serve customers directly; thus, upgrading of voltage would require all customers and existing stations to be rebuilt in order to be served from 345-kV facilities.

86. Conductor bundling would not address the reliability and operational issues under the contingencies of concern because any bundled circuits would necessarily be located on the same structures as the existing 138-kV lines in the area. Additionally, bundling conductors does not provide bi-directional looped service capability, which is needed to address the reliability and operational flexibility for existing and future customers.

87. Adding transformers would not address the reliability and operational issues under the contingency of concern since new 345/138-kV transformers within the Culberson Loop would still be served from the planned Odessa EHV – Riverton/Moss – Riverton 345-kV transmission line.

88. The Sand Lake-to-Solstice Project will address critical reliability issues resulting from rapid load growth in an area of oil and natural gas development and associated economic expansion; more specifically, the Sand Lake-to-Solstice Project will support load growth in the area, address reliability violations under ERCOT protocols and NERC reliability standards, and provide infrastructure necessary to facilitate future transmission system expansion, all of which will improve service for new and existing customers in the area.

89. The Sand Lake-to-Solstice Project will deliver 345-kV transmission to an area that is not currently served at this voltage.

90. The Sand Lake-to-Solstice Project is the best way to ensure adequate voltage in the Far West Texas area based on considerations of engineering, efficiency, reliability, costs, and benefits.

91. The Sand Lake-to-Solstice Project will improve transmission service in the Far West Texas area.

92. No party has challenged the need for the proposed transmission facilities, and a unanimous stipulation concerning the need for the facilities was admitted into evidence.

Effect of Granting Certificate on Other Utilities

93. The Sand Lake-to-Solstice Project will not adversely affect service by other utilities in the area and will improve system reliability and capacity in the area.

Estimated Costs

94. The estimated costs for the alternative routes range from $98,220,000 to $126,903,000, excluding station costs.

95. Oncor estimates the project-related modifications at Sand Lake Switch will cost approximately $17.6 million. AEP Texas estimates the project-related modifications to Solstice Switch will cost approximately $10.1 million for upgrades to interconnect the transmission line from Sand Lake.

96. Oncor intends to finance its portion of the transmission facilities with a combination of debt and equity in compliance with its authorized capital structure.

97. AEP intends to finance its portion of the transmission facilities with a combination of debt and equity.

Routes

98. Route 320 is estimated to cost $98,220,000, excluding station costs, which is the least expensive of the alternative routes and $28,683,000 less than the most expensive alternative route filed with the Application.

99. Route 320 is 44.5 miles long and consists of Links A, B2, B3, C2, D2, F3, G4, G51, I2, J1, J7, L1, and Z.

100. Three other routes were addressed in testimony and at the hearing on the merits. Excluding substation costs, Route 41 would cost $99,818,000 and is 45.7 miles in length; Route 324 would cost $105,272,000 and is 47.2 miles in length; and Route 325 would cost $116,382,000 and is 53.7 miles in length.

101. Oxy and Concho proposed modifications to Routes 325 and 320, but they had not obtained landowner consents from all landowners to implement those modifications as of March 19, 2019, when the record closed in this docket.

Prudent Avoidance

102. Prudent avoidance is defined in 16 TAC § 25.101(a)(6) as the "limiting of exposures to electric and magnetic fields that can be avoided with reasonable investments of money and effort."

103. The greatest number of habitable structures within 500 feet of the centerline of any alternative route is 66, and the least number of habitable structures within 500 feet of the centerline of any alternative route is 2.

104. Route 320 has 38 habitable structures within 500 feet of the centerline, of which 34 are mobile living or office units that are temporarily in place and appear to have no permanent foundations or permanent utilities in place.

105. All of the alternative routes presented in the Application, including route 320, conform to the Commission's policy of prudent avoidance in that they reflect reasonable investments of money and effort in order to limit exposure to electric and magnetic fields.

106. A modification to Link B2 on Route 320, proposed and agreed to by Plains Pipeline, would bisect the western turn in that link and result in 12 of 36 habitable structures otherwise on that link being more than 500 feet from the centerline of the modified link.

Community Values

107. The majority of the Sand Lake-to-Solstice Project area consists of rural, undeveloped land used primarily for oil and gas production, livestock grazing, and irrigated crop production.

108. None of the identified routes traverse a heavily populated residential area. Whenever possible, the Applicants and Halff avoided identifying alternative route segments near habitable structures.

109. The Sand Lake-to-Solstice Project comports with the community values for the area it encompasses.

Using or Paralleling Compatible Rights-of-Way

110. In developing alternative routes, the Applicants took into account the use of the paralleling of existing ROWs (*e.g.*, existing transmission lines, public roads and highways, railroads, and telephone utilities), apparent property boundaries, and natural or cultural features.

111. The alternative routes are adjacent to and parallel existing transmission lines, other existing ROW (*e.g.*, existing transmission lines, public roads and highways, railroads, and telephone utilities), and apparent property lines from 17.3% to 48.7% of the length of the route.

112. Route 320 is parallel to existing compatible corridors, including existing transmission lines, public roads and highways, railroads, and apparent property boundaries, for approximately 27.2% of its length.

Engineering Constraints

113. The area encompassing the Sand Lake-to-Solstice Project is undergoing rapid development in energy infrastructure.

Radio Towers and Other Electronic Installations

114. There are no commercial AM radio transmitters within 10,000 feet of the centerline of Route 320.

115. There are no known FM, microwave, and other electronic installations located within 2,000 feet of the centerline of Route 320. One such installation is located within 2,000 feet of the centerline of Route 325, and two such installations are located within 2,000 feet of the centerline of Route 324.

Airstrips and Airports

116. The number of Federal Aviation Administration (FAA)-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of the centerline of the alternative routes ranges from zero to two.

117. There are no FAA-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of the centerlines of Route 320, 41, 324, or 325.

118. There are no private airstrips within 10,000 feet of the centerline of any of the alternative routes.

119. There are no heliports within 5,000 feet of the centerline of any of the alternative routes.

Irrigation Systems

120. With the exception of Routes 370 and 404, none of the alternative routes, including Route 320, impact any agricultural cropland with mobile irrigation systems.

Recreational and Park Areas

121. None of the alternative routes, including Route 320, directly cross any park or recreational areas.

122. No parks or recreational areas are located within 1,000 feet of the centerline of any of the alternative routes, including Route 320.

123. No significant impacts to the use of parks or recreation facilities located within the study area are anticipated from any of the alternative routes, including Route 320.

Historical and Archaeological Values

124. The number of recorded cultural resource sites crossed by an alternative route ranges from zero to two.

125. Routes 320, 41, and 324 do not cross any recorded cultural resource sites.

126. Route 325 crosses one recorded cultural resource.

127. No significant impacts to historical and archaeological values are anticipated from Route 320.

Aesthetic Values

128. The length of the route within the foreground visual zone of U.S. and state highways of the alternative routes ranges from 14,222 to 32,979 feet.

129. Routes 320, 41, and 324 each have 20,298 feet within the foreground visual zone of U.S. and state highways.

130. Route 325 has 32,979 feet within the foreground visual zone of U.S. and state highways.

Environmental Integrity

131. The EA analyzed the possible impacts of the Sand Lake-to-Solstice Project on numerous different environmental factors.

132. The Applicants and Halff appropriately performed an evaluation of the impacts of the Sand Lake-to-Solstice Project on the environment, including endangered and threatened species.

133. It is appropriate that the Applicants minimize the amount of flora and fauna disturbed during construction of the transmission facilities.

134. It is appropriate that the Applicants re-vegetate cleared and disturbed areas using native species and consider landowner preferences in doing so.

135. It is appropriate that the Applicants avoid, to the maximum extent reasonably possible, causing adverse environmental impacts to sensitive plant and animal species and their habitats as identified by TPWD and the United States Fish and Wildlife Service (USFWS).

136. It is appropriate that the Applicants implement erosion control measures and return each affected landowner's property to its original contours and grades unless otherwise agreed to by the landowners. It is not appropriate that the Applicants restore original contours and grades where different contours and grades are necessary to ensure the safety or

stability of any transmission line's structures or the safe operation and maintenance of the transmission lines.

137. It is appropriate that the Applicants exercise extreme care to avoid affecting non-targeted vegetation or animal life when using chemical herbicides to control vegetation within the ROW, and such herbicide use must comply with the rules and guidelines established in the Federal Insecticide, Fungicide, and Rodenticide Act and with Texas Department of Agriculture regulations.

138. It is appropriate that the Applicants use best management practices to minimize the potential impact to migratory birds and threatened or endangered species.

139. The Sand Lake-to-Solstice Project is not anticipated to significantly adversely impact populations of any federally-listed endangered or threatened species.

140. No significant impacts to geological resources, hydrological resources, wetland resources, ecological resources, endangered and threatened species, land use or environmental integrity are anticipated as a result of the construction of the Sand Lake-to-Solstice Project.

Probable Improvement of Service or Lowering of Consumer Cost

141. The Sand Lake-to-Solstice Project is needed to satisfy reliability and load growth issues in the project area, and it will result in improved service to electric customers for the reasons described in the findings of fact addressing the need for the Sand Lake to Solstice Project.

TPWD's Comments and Recommendations

142. On January 15, 2019, TPWD filed a letter making various comments and recommendations regarding the Sand Lake-to-Solstice Project.

143. TPWD's comment letter addressed issues relating to impacts on ecology and the environment, but did not consider the other factors the Commission and utilities must consider in CCN applications.

144. The Applicants and Halff have taken into consideration the recommendations offered by TPWD.

145. Halff relied on habitat descriptions from various sources, including the Texas Natural Diversity Database and other sources provided by TPWD, along with observations from

field reconnaissance, to determine whether habitat for some species is present in the area encompassing the transmission facilities.

146. Once a route is approved by the Commission, the Applicants can undertake on-the-ground measures to identify potential endangered or threatened species' habitats and respond appropriately.

147. The Applicants will use avoidance and mitigation procedures to comply with laws protecting federally listed species.

148. The Applicants will revegetate the new ROW as necessary and according to the Applicants' vegetation management practices, the Storm Water Pollution Prevention Plan (SWPPP) developed for construction of the Sand Lake-to-Solstice Project, and, in many instances, landowner preferences or requests.

149. The Applicants' standard vegetation removal, construction, and maintenance practices adequately mitigate concerns expressed by TPWD.

150. The Applicants will use appropriate avian protection procedures.

151. The Applicants will comply with all environmental laws and regulations, including those governing threatened and endangered species.

152. The Applicants will comply with all applicable regulatory requirements in constructing the Sand Lake-to-Solstice Project, including any applicable requirements under Section 404 of the Clean Water Act.

153. The Applicants will coordinate with USFWS and TPWD if threatened or endangered species' habitats are identified during field surveys.

154. Environmental permitting and mitigation measures are determined after a route is approved by the Commission and on-the-ground surveys are completed for the route. Should construction impact federally-listed species or their habitat or impact water under the jurisdiction of the United States Army Corps of Engineers or the Texas Commission on Environmental Quality (TCEQ), the Applicants will coordinate with the USFWS, United States Army Corps of Engineers, and TCEQ as appropriate to coordinate permitting and any required mitigation.

155. The standard mitigation requirements included in the ordering paragraphs in this Order, coupled with the Applicants' current practices, are reasonable measures for a transmission service provider to undertake when constructing a transmission line and are sufficient to address TPWD's comments and recommendations.

Permits

156. Before beginning construction of the Sand Lake-to-Solstice Project, it is appropriate for the Applicants to conduct a field assessment of each utility's portion of the transmission line to identify water resources, cultural resources, potential migratory bird issues, and threatened and endangered-species' habitats impacted as a result of the transmission line. As a result of these assessments, the Applicants will identify any additional permits that are necessary, will consult any required agencies, will obtain all necessary permits, and will comply with the relevant permit conditions during construction and operation of their respective portions of the transmission line.

Coastal Management Program

157. Commission rule 16 TAC § 25.102(a) states that the "commission may grant a certificate for the construction of generating or transmission facilities within the coastal boundary as defined in 31 TAC § 503.1 only when it finds that the proposed facilities are consistent with the applicable goals and policies of the Coastal Management Program specified in 31 TAC § 501.14(a), or that the proposed facilities will not have any direct and significant impacts on any of the applicable coastal natural resource areas specified in 31 TAC § 503.1(b)."

158. No part of the Sand Lake-to-Solstice Project is located within the boundary of the Coastal Management Program as defined in 31 TAC § 501.3(b).

Effect on the State's Renewable Energy Goal

159. The Texas Legislature established a goal in PURA § 39.904(a) for 10,000 megawatts of renewable capacity to be installed in Texas by January 1, 2025. This goal has already been met.

160. The Sand Lake-to-Solstice Project will not adversely affect the goal for renewable energy development established in PURA § 39.904(a).

Conditional Authority

161. It is reasonable and appropriate for a CCN order not to be valid indefinitely because it is issued based on the facts known at the time of issuance.

162. Seven years is a reasonable and appropriate limit to place on the authority granted in this Order to construct the transmission facilities.

X. CONCLUSIONS OF LAW

1. Oncor is a public utility as defined in PURA § 11.004 and an electric utility as defined in PURA § 31.002(6).

2. AEP Texas is a public utility as defined in PURA § 11.004 and an electric utility as defined in PURA § 31.002(6).

3. Oncor and AEP Texas must obtain the approval of the Commission to construct the proposed transmission facilities and provide service to the public using those facilities.

4. The Application is sufficient under 16 TAC § 22.75(d).

5. This docket was processed in accordance with the requirements of PURA, the Administrative Procedure Act (Texas Government Code Chapter 2001), and the Commission's rules.

6. Oncor and AEP Texas provided proper notice of the Application in compliance with PURA § 37.054 and 16 TAC § 22.52(a).

7. Additional notice of the approved route is not required.

8. Oncor and AEP Texas provided notice of the public open house meeting in compliance with 16 TAC § 22.52(a)(4).

9. The Sand Lake-to-Solstice Project using Route 320, with a modification to Link B2, is necessary for the service, accommodation, convenience, or safety of the public within the meaning of PURA § 37.056.

10. The Texas Coastal Management Program does not apply to any of the transmission facilities proposed in the Application, and the requirements of 16 TAC § 25.102 do not apply to the Application.

11. No modifications to the Sand Lake-to-Solstice Project are required as a result of the recommendations and comments made by TPWD.

12. The Commission has jurisdiction and authority over this matter under PURA §§ 14.001, 32.001, 37.051, 37.053, 37.054, and 37.056.

13. SOAH has jurisdiction to conduct a hearing on the merits and to prepare a proposal for decision under PURA § 14.053 and Texas Government Code §§ 2003.021 and 2003.049.

14. The hearing on the merits was set, and notice of the hearing was provided, in compliance with PURA § 37.054 and Texas Government Code §§ 2001.051 and 2001.052.

15. Route 320, with a modification to Link B2, complies with PURA § 37.056(c)(4) and 16 TAC § 25.101, including the Commission's policy of prudent avoidance, to the extent reasonable to moderate the impact on the affected community and landowners.

XI. ORDERING PARAGRAPHS

1. The Commission approves the construction and operation of the Sand Lake-to-Solstice Project as specified in this Order on route 320, comprised of the following segments: A, B2, B3, C2, D2, F3, G4, G51, I2, J1, J7, L1, Z, with the modification to Link B2 proposed by Plains Pipeline.

2. The Commission approves Oncor's and AEP Texas's application to build a new double-circuit 345-kV transmission line extending from Oncor's Sand Lake Switch in Ward County to AEP Texas's Solstice Switch in Pecos County. The approved route for the transmission facilities is Route 320, with a modification to Link B2, as described in the EA.

3. The Commission amends Oncor's CCN number 30158 to include construction and operation of the transmission facilities requested from Sand Lake Switch up to, but not including, the structure at the node of Links G4 and G51.

4. The Commission amends AEP Texas's CCN number 30170 to include construction and operation of the transmission facilities requested from Solstice Switch up to, and including, the structure at the node of Links G4 and G51.

5. The Commission limits the authority granted by this Order to a period of seven years from the date the order is signed unless the transmission line is commercially energized before that time.

6. If the Applicants or their contractors encounter any archaeological artifacts or other cultural resources during project construction, work must cease immediately in the vicinity of the artifact or resource and the discovery must be reported to the Texas Historical Commission (THC). In that situation, the Applicants must take action as directed by the THC.

7. The Applicants must follow the procedures to protect raptors and migratory birds as outlined in the following publications: *Reducing Avian Collisions with Power Lines:*

State of the Art in 2012, Edison Electric Institute (EEI) and Avian Power Line Interaction Committee (APLIC); *Suggested Practices for Avian Protection on Power Lines. The State of the Art in 2006*, EEI, APLIC, and the California Energy Commission, Washington, DC and Sacramento, CA, 2006; and the *Avian Protection Plan Guidelines*, APLIC and USFWS, April 2005. The Applicants must take precautions to avoid disturbing occupied nests and take steps to minimize the impact of construction on migratory birds during the nesting season of the migratory bird species identified in the area of construction.

8. The Applicants must exercise extreme care to avoid affecting non-targeted vegetation or animal life when using chemical herbicides to control vegetation within the ROW. Herbicide use must comply with rules and guidelines established in the Federal Insecticide, Fungicide, and Rodenticide Act and with Texas Department of Agriculture regulations.

9. The Applicants must minimize the amount of flora and fauna disturbed during construction of the transmission line, except to the extent necessary to establish appropriate ROW clearance for the transmission line. In addition, the Applicants must re-vegetate using native species and must consider landowner preferences and wildlife needs in doing so. Furthermore, to the maximum extent practical, the Applicants must avoid adverse environmental impact to sensitive plant and animal species and their habitats, as identified by TPWD and the USFWS.

10. The Applicants must implement erosion control measures as appropriate. Erosion control measures may include inspection of the ROW before and during construction to identify erosion areas and implement special precautions as determined reasonable to minimize the impact of vehicular traffic over the areas. The Applicants must return each affected landowner's property to its original contours and grades unless otherwise agreed to by the landowner or the landowner's representative. The Applicants will not be required to restore original contours and grades where a different contour or grade is necessary to ensure the safety or stability of the structures or the safe operation and maintenance of the line.

11. The Applicants must use best management practices to minimize the potential impact to migratory birds and threatened or endangered species.

12. The Applicants must cooperate with directly affected landowners to implement minor deviations in the approved route to minimize the impact of the proposed transmission line project. Any minor deviations in the approved route must only directly affect landowners who received notice of the transmission line in accordance with 16 TAC § 22.52(a)(3) and landowners that have agreed to the minor deviation.

13. The Applicants are not permitted to deviate from the approved route in any instance in which the deviation would be more than a minor deviation without further amending their CCNs.

14. The Applicants must conduct surveys, if not already completed, to identify metallic pipelines that could be affected by the transmission line and coordinate with pipeline owners in modeling and analyzing potential hazards because of alternating-current interference affecting pipelines being paralleled.

15. If possible, and subject to the other provisions of this Order, the Applicants must prudently implement appropriate final design for the transmission lines so as to avoid being subject to the FAA's notification requirements. If required by federal law, the Applicants must notify and work with the FAA to ensure compliance with applicable federal laws and regulations. The Applicants are not authorized to deviate materially from this Order to meet the FAA's recommendations or requirements. If a material change would be necessary to comply with the FAA's recommendations or requirements, the Applicants must file an application to amend their CCNs as necessary.

16. The Applicants must identify any additional permits that are necessary, must consult any required agencies (such as the United States Army Corps of Engineers and USFWS), must obtain all necessary environmental permits, and must comply with the relevant conditions during construction and operation of the proposed transmission facilities.

17. The Applicants must include the transmission facilities approved by this Order on their monthly construction progress reports before the start of construction to reflect the final estimated cost and schedule in accordance with 16 TAC § 25.83(b). In addition, the Applicants must provide final construction costs, with any necessary explanation for cost variance, after completion of construction when all costs have been identified.

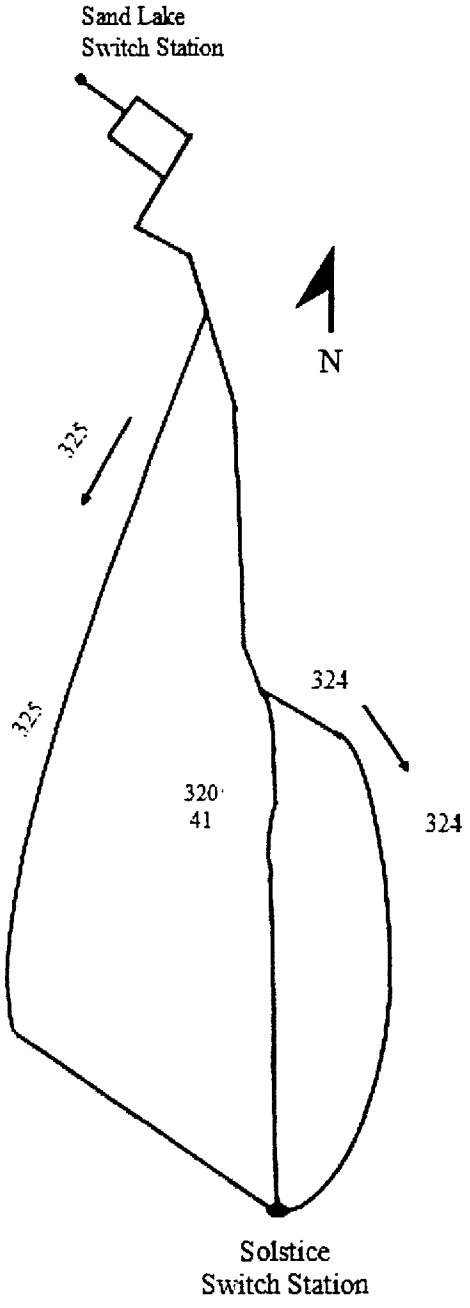
18. All other motions, requests for entry of specific findings of fact or conclusions of law, and any other requests for general or specific relief, if not expressly granted herein, are hereby denied.

SIGNED April 10, 2019.

STEVEN H. NEINAST
ADMINISTRATIVE LAW JUDGE
STATE OFFICE OF ADMINISTRATIVE HEARINGS

GABRIEL P. SOTO
ADMINISTRATIVE LAW JUDGE
STATE OFFICE OF ADMINISTRATIVE HEARINGS

APPENDIX A


Sand Lake
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Switch Station

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SERVICE LIST

AGENCY: **Public Utility Commission of Texas (PUC)**

STYLE/CASE: **APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY, LLC AND AEP TEXAS INC. TO AMEND CERTIFICATES OF CONVENIENCE AND NECESSITY FOR A DOUBLE CIRCUIT 345-KV TRANSMISSION LINE IN PECOS, REEVES, AND WARD COUNTIES (SAND LAKE-OLSTICE CCN)**

SOAH DOCKET NUMBER: **473-19-1265**

REFERRING AGENCY CASE: **48785**

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ONCOR ELECTRIC DELIVERY CO. LLC

Note: ALSO SOAH DOCKET 473-19-1266 AND PUC DOCKET 48787